SOVIET MILITARY POWER

1983

SOVIET MILITARY POWER
First Edition
September 1981

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Second Edition
March 1983

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The illustrations of new Soviet weapons systems introducing each chapter are derived from various US sources; while not precise in every detail, they are as authentic as possible.

PREFACE

"There is nothing hypothetical about the Soviet military machine. Its expansion, modernization, and contribution to projection of power beyond Soviet boundaries are obvious. A clear understanding of Soviet Armed Forces, their doctrine, their capabilities, their strengths, and their weaknesses is essential to the shaping and maintenance of effective US and Allied armed forces."

Those words from *Soviet Military Power,* published in September 1981, provide a fitting point of departure for this updated second edition. *Soviet Military Power 1983* reports on the size, capabilities, and deployment of the Soviet Armed Forces—and documents the improvements and the R&D which are shaping the increased capabilities of the Soviet Strategic Rocket Forces, the Air Defense Forces, the Ground Forces, the Air Forces, and the Navy—forces numbering more than 4.9 million men.

Since late 1981:

- The USSR has begun test flights of two new land-based Intercontinental Ballistic Missiles, while continuing modernization of the deployed SS-17, SS-18, and SS-19 ICBM force.
- The USSR has begun test flights of a new generation of strategic, manned bombers—the BLACKJACK bomber, larger than the US B-1.
- The USSR has begun test flights of a new generation of ground-, sea- and air-launched cruise missiles, missiles with nuclear capability with ranges in excess of 1,600 kilometers, significantly expanding the flexibility of Soviet strategic options.
- The first of the USSR's 25,000-ton TYPHOON-Class strategic ballistic missile submarines has test fired its MIRVed, nuclear-warhead, 8,300-kilometer-range, submarine-launched ballistic missiles. A second TYPHOON has been launched.
- Modernization and forward deployment of increasing numbers of Soviet intermediate nuclear forces—land, sea, and air—have proceeded at an unparalleled pace.
- More than 330 mobile launchers for the SS-20—a Longer-Range Intermediate-Range Nuclear Force (LRINF) missile with three nuclear warheads and reloads for each launcher—are now arrayed against Western Europe, the Middle East, parts of Africa, and most of Asia, including China and Japan.
- Su-24/FENCER ground-attack aircraft have been forward-deployed to nations of Eastern Europe and to border bases in Asia, extending the combat radius of these new nuclear-capable aircraft to include Japan and most of NATO Europe.
- The USSR has introduced additional nuclear-capable weapons systems to its forward-deployed divisions in Eastern Europe. The new SS-21 mobile, short-range ballistic missile system is operational in Eastern Europe as is the 152-mm self-propelled gun, adding to Soviet conventional, chemical, and nuclear war-fighting options.
- The USSR's T-80 main battle tank, in development in 1981, is in the field with Soviet Tank Divisions in both the USSR and Eastern Europe, adding to the extended combat capabilities of the more than 190 Soviet ground force divisions.
- In 1981, two Soviet KIEV-Class aircraft carriers were operational. Now, three units are on the high seas; a fourth unit has been launched; and development continues on a newer, larger class of aircraft carriers.

• In shipyards on the Baltic and Black Seas, series production continues on four new classes of surface warships—a new generation of nuclear- and conventionally powered Soviet cruisers and guided missile destroyers enhancing the Soviet Navy's air defense, antisubmarine warfare, and cruise-missile, surface-strike capabilities.

• Five Soviet shipyards have continued to produce new attack submarines for the world's largest submarine force. In 1980, the first of the new, extremely large OSCAR-Class guided missile submarines was launched, a submarine capable of firing up to 24 long-range antiship cruise missiles while submerged. That lead unit is now on sea trials, and a second unit has been launched.

• The USSR's military-related space program has grown in manned missions, more reconnaissance/surveillance/targeting satellites and antisatellite space systems.

• The USSR's combat operations have continued to expand in Afghanistan, and now involve more than 105,000 Soviet troops with some of the newest Soviet weapons.

• From Indochina to the Caribbean, the USSR has continued to expand its global military presence. To cite just one example, a Soviet Navy task force operated in the Caribbean and Gulf of Mexico from November 1982 to February 1983.

• Expansion of the USSR's technology and industrial production base has matched the growth and deployment of its armed forces, reflecting a top priority investment in defense production aided by continuing acquisition of Western technology.

• Despite economic difficulties, the USSR allocates an estimated 15 percent of GNP to its military buildup, an increase from the 12-to-14 percent reported in 1981, which in turn represents a continuance of the trend of the last 21 years.

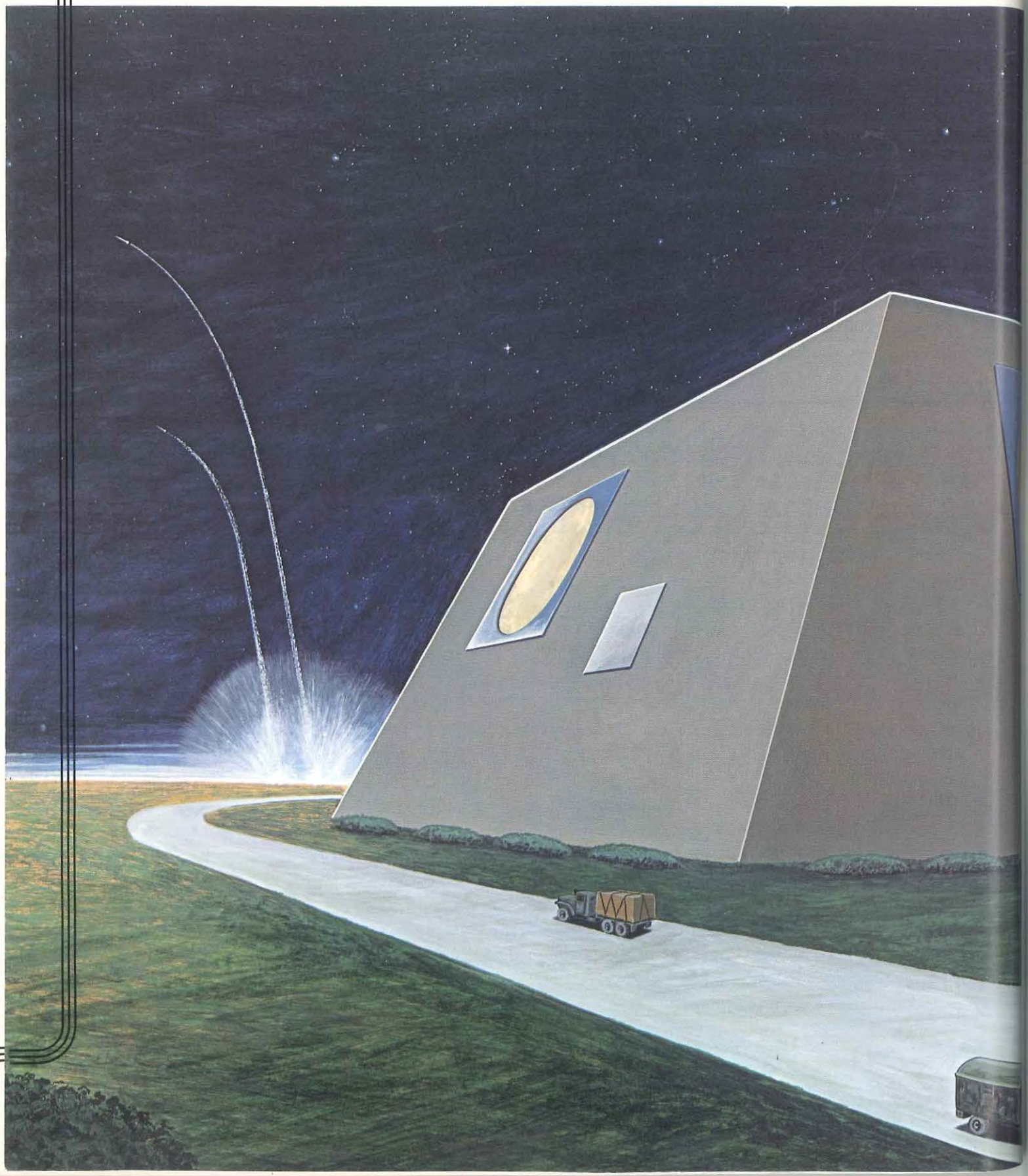
To place this modernization and growth of the USSR's Armed Forces in perspective, *Soviet Military Power 1983* includes substantial data on US and Allied forces enhancement as well as some comparative US-USSR and NATO-Warsaw Pact tables. Comprehensive information on US forces, of course, is regularly made available to the public in such publications as the Secretary of Defense's *Annual Report* and the *Military Posture Statement* of the Chairman of the Joint Chiefs of Staff. Ours is a free society; the Soviet Union is not. The updated facts presented in this report leave no doubt as to the USSR's dedication to achieving military superiority in all fields.

It is our duty to have a full awareness of Soviet military growth, modernization and capabilities and to shape our defense forces and our deterrent capabilities accordingly. We can do no less if we are to provide fully and wisely for our security, and that of our Allies. Ours is a formidable task, made more difficult by a decade of our neglect coupled with two decades of massive Soviet increases. But, we and our Allies can accomplish the task if we have the will, the courage, and the resolution possessed in ample measure by our predecessors who won our freedom, and who have kept it for us all. This is at once our most precious heritage and our most solemn responsibility to posterity.

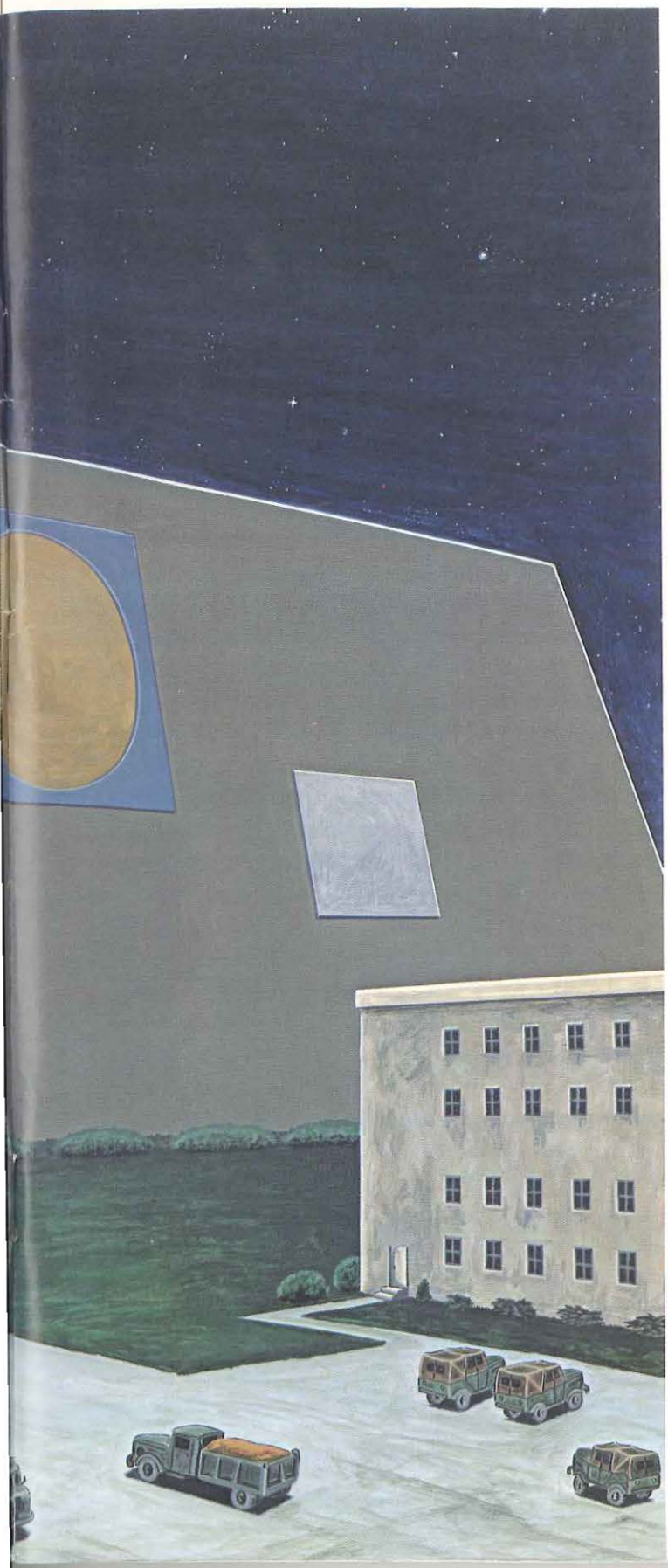
March 1983

Caspar W. Weinberger
Secretary of Defense

I SOVIET MILITARY POW



ER



The continuing growth and modernization of the Soviet military have enabled the Soviet Union to structure and posture its forces for offensive use on short notice. Consequently, the need for the fullest possible information on the mission, capabilities and deployment of the Soviet Union's Armed Forces is today greater than ever before.

In the nuclear area, the Soviets continue to build far greater numbers of missiles and warheads than are necessary for a credible deterrent capability. Soviet conventional forces have increased offensive capabilities, and the Soviets have demonstrated detailed plans for the offensive use of these forces. Soviet tactical air and missile forces continue to acquire advanced weapons systems and support systems designed for the conduct of large-scale air offensives. Soviet ground force modernization, deployment and training permit rapid and sustained forward movement from peacetime locations to objectives well beyond Soviet/Warsaw Pact borders. At the same time, it is clear from Soviet strategic planning and operations that its naval ships and aircraft are committed to denying opposing navies use of adjacent seas and conducting strikes against enemy land targets.

In September 1981, *Soviet Military Power* was published to make available to people everywhere a factual report on the magnitude of the Soviet military buildup and the changing character of Soviet military objectives. That first report:

- examined the Soviet and non-Soviet Warsaw Pact military industrial base, the

The new Pushkino Antiballistic Missile Radar—part of the continuing modernization of Soviet military power—provides 360° strategic defense coverage from the phased array radars in its four-sided structure 120 feet high and 500 feet wide. Silo-launched interceptor missiles contribute to this improved ABM defense of Moscow.

world's largest in facilities and physical size;

- described the organization of Soviet Armed Forces, the USSR's strategic command structure, command and control, logistic support and combat doctrine;
- described the Soviet conventional and nuclear land, sea and air forces designated for theater operations;
- reviewed the increasing capabilities of Soviet strategic forces, including the SS-17, SS-18, and SS-19 ICBMs, and the continuing modernization of the submarine-launched ballistic missile force;
- described the research and development effort behind the USSR's drive for modern military technology;
- reported on the USSR's projection of military power around the world; and
- summarized the challenge posed to the United States and its Allies by the Soviet Armed Forces.

Two fundamentally important considerations have now led to this updated report, *Soviet Military Power 1983.* First, the USSR during the past year has pushed ahead with force modernization, expansion and forward deployment on a scale even larger than before. Second, the American people and free people everywhere have continued to seek the most recent information on Soviet military developments, as well as information comparing the forces of the Warsaw Pact with forces of the United States and other NATO nations to permit a fuller appreciation of the magnitude of the Soviet force buildup. Such comparative data are included in this report.

The chart, "Soviet Military Forces," on pages 8 and 9 summarizes the size and composition of the USSR's strategic nuclear forces, ground forces, air forces, air defense forces, and naval forces. Each chapter in this report develops a different aspect of the current dimensions of Soviet military power.

The US-USSR and NATO-Warsaw Pact charts and tables in the chapters that follow help to depict the shift in the military balance. These charts are not all-inclusive. Comprehensive information on US forces is regularly made available to the people of the United States and throughout the world in such publications as the Secretary of Defense's *Annual Report* and the *Military Posture Statement* of the Chairman of the Joint Chiefs of Staff. The Soviet Union does not make such information available. Thus, the focus of *Soviet Military Power 1983* is on the Soviet Union's Armed Forces.

Weapons production, for example, is an indicator of the shifting balance over the past decade. The Soviets have manufactured approximately 2,000 ICBMs; 54,000 tanks and other armored vehicles; 6,000 tactical combat aircraft; 85 surface warships and 61 attack submarines—with much of this stockpile of material comparable in quality to US counterpart systems. US production over the same period has been considerably less—approximately 350 ICBMs, 11,000 tanks and other armored vehicles, 3,000 tactical combat aircraft, 72 surface warships and 27 attack submarines.

In 1982, the North Atlantic Treaty Organization published *NATO and the Warsaw Pact—Force Comparisons,* a publication carrying the conviction and authority of all the NATO nations that participate in the integrated military structure of the Alliance. In his foreword, NATO Secretary General Joseph M.A.H. Luns stated:

"The numerical balance of forces has moved slowly but steadily in favor of the Warsaw Pact over the past two decades. During this period the members of the North Atlantic Alliance have lost much of the technological edge which permitted NATO to

rely on the view that quality could compensate for quantity. It is clear that the trend is dangerous. Nevertheless, the overall deterrent continues to safeguard peace."

NATO-Warsaw Pact comparative data from this report—data that address the totality of Soviet/Pact forces that could be brought to bear against NATO in the event of war—are presented in the concluding section of Chapter III of this document.

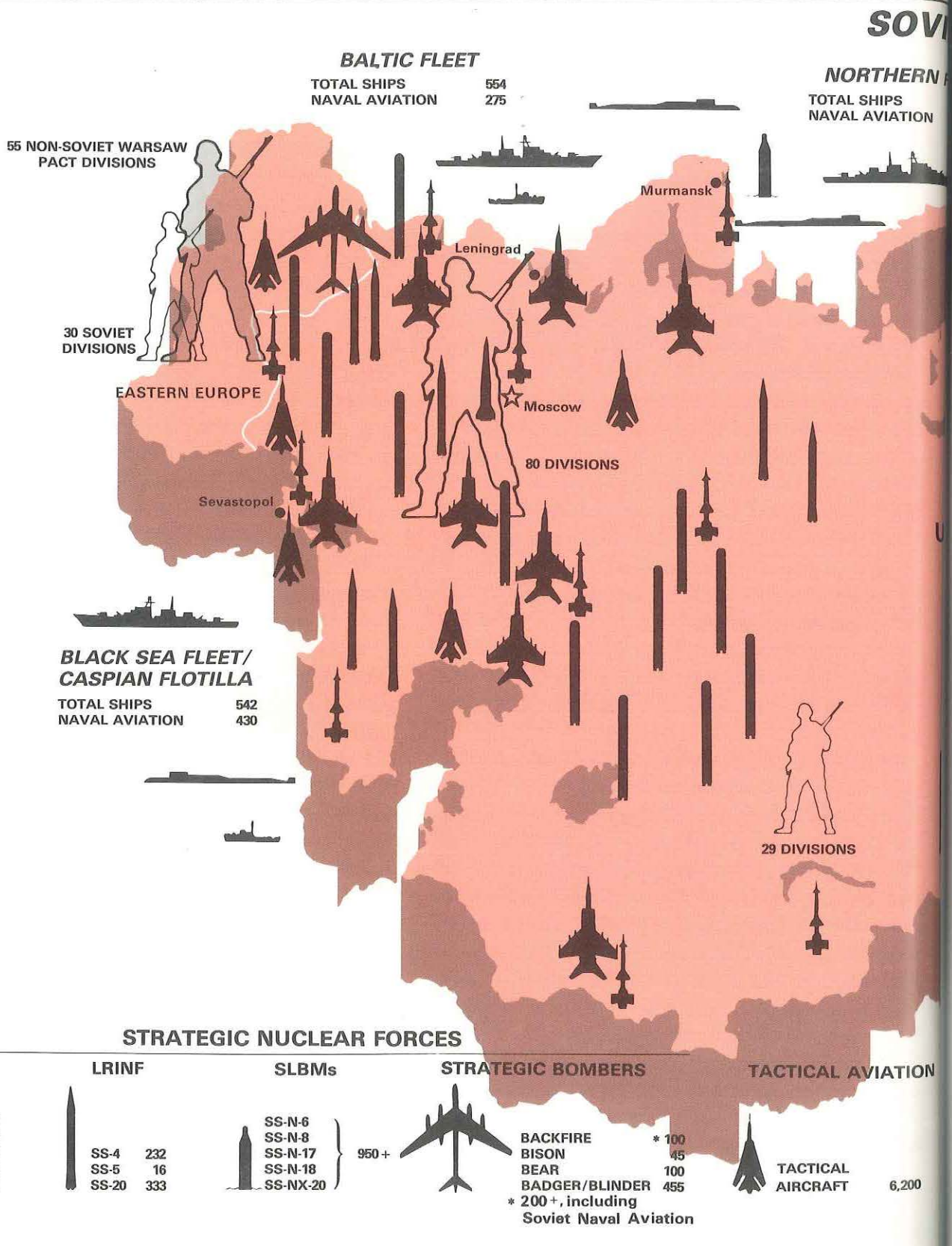
The illustrations opening Chapters I and II—the new ABM radar in the Moscow area and the new strategic BLACKJACK bomber—dramatize the continuing upgrade of Soviet strategic force capabilities. Chapter II examines Soviet strategic force developments in detail. The third and fourth generations of Soviet ICBMs currently deployed and under development continue to emphasize the missile force improvements of more than a decade—greatly improved nuclear-warhead accuracy; multiple, independently targetable re-entry vehicles (MIRVs); reliability and survivability. At least two new solid-propellant ICBMs are under development; flight testing began in 1982 and 1983.

New, long-range, air-launched cruise missiles currently under development and the strategic BLACKJACK bomber will significantly enhance the USSR's strategic offensive capabilities. The BLACKJACK is a variable-geometry-wing—swing-wing—aircraft similar to, but larger than, the US B-1 bomber. It will be capable of long-range subsonic cruise with supersonic high-altitude dash and subsonic/transonic low-level penetration. This new bomber will likely be a multiple-role aircraft that can deliver both free-fall bombs and air-launched cruise missiles to intercontinental range. It is particularly significant given the weakness of North American air defense.

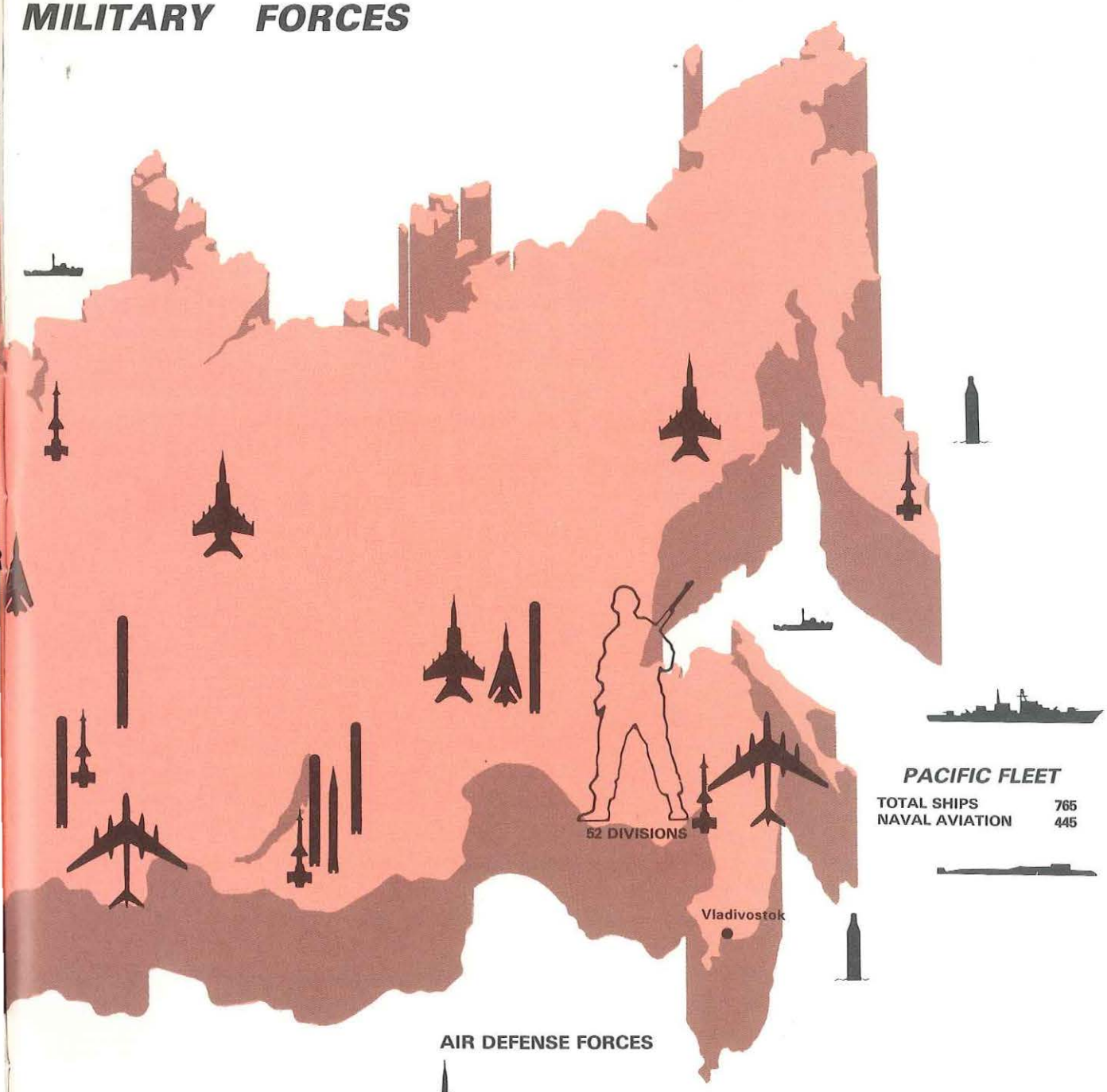
At the same time, the Soviets have steadily modernized their sea-based strategic force. A second TYPHOON-Class nuclear-powered ballistic missile submarine (SSBN) has been launched at the Severodvinsk Shipyard, while the first TYPHOON is now with the Northern Fleet. Armed with 20 launchers for the MIRV-ed SS-NX-20 solid-fueled submarine-launched ballistic missile (SLBM), the first submarine of its class should be fully operational by the end of 1983. Moreover, the 8,300 kilometer range of the SS-NX-20 places all of NATO Europe, North America and Asia well within TYPHOON's reach, even when operating in home waters.

As detailed in Chapter II, the USSR's strategic defense force is the most massive in the world. It includes active defenses such as modern interceptor aircraft, surface-to-air missiles (SAMs) and ballistic missile defense (BMD) systems; and passive defenses such as surveillance and warning systems, hardened bunkers, electronic countermeasures (ECM) and civil defense.

In the first edition of *Soviet Military Power,* more than 180 Soviet Ground Force divisions and some 250 SS-20 LRINF missile launchers in the field were identified. Today there are over 190 Soviet Ground Force divisions and more than 330 SS-20 missile launchers positioned for delivery of nuclear warheads against Western Europe, the Middle East, parts of Africa, and most of Asia including China and Japan. Chapter III presents an updated review of the full array of Soviet nuclear and conventional theater forces and their readiness for deployment in the three theaters of operations—the Western, Southern and Far Eastern Theaters. These forces, opposite NATO and arrayed against the nations of Southwest Asia and East Asia, have been further strengthened during 1982 by the addition of new SS-20 launchers, and by the forward deployment of additional nuclear-capable weapons systems such as the long-range


SOVI
BALTIC FLEET
TOTAL SHIPS 554
NAVAL AVIATION 275
NORTHERN F
TOTAL SHIPS
NAVAL AVIATION
55 NON-SOVIET WARSAW PACT DIVISIONS
Murmansk
Leningrad
30 SOVIET DIVISIONS
EASTERN EUROPE
Moscow
80 DIVISIONS
Sevastopol
BLACK SEA FLEET/ CASPIAN FLOTILLA
TOTAL SHIPS 542
NAVAL AVIATION 430
29 DIVISIONS
STRATEGIC NUCLEAR FORCES
ICBMs
SS-11 550
SS-13 60
SS-17 150
SS-18 308
SS-19 330
LRINF
SS-4 232
SS-5 16
SS-20 333
SLBMs
SS-N-6
SS-N-8
SS-N-17
SS-N-18
SS-NX-20
950+
STRATEGIC BOMBERS
BACKFIRE * 100
BISON 45
BEAR 100
BADGER/BLINDER 455
* 200+, including Soviet Naval Aviation
TACTICAL AVIATION
TACTICAL AIRCRAFT 6,200

MILITARY FORCES



PACIFIC FLEET

TOTAL SHIPS	765
NAVAL AVIATION	445

GROUND FORCES

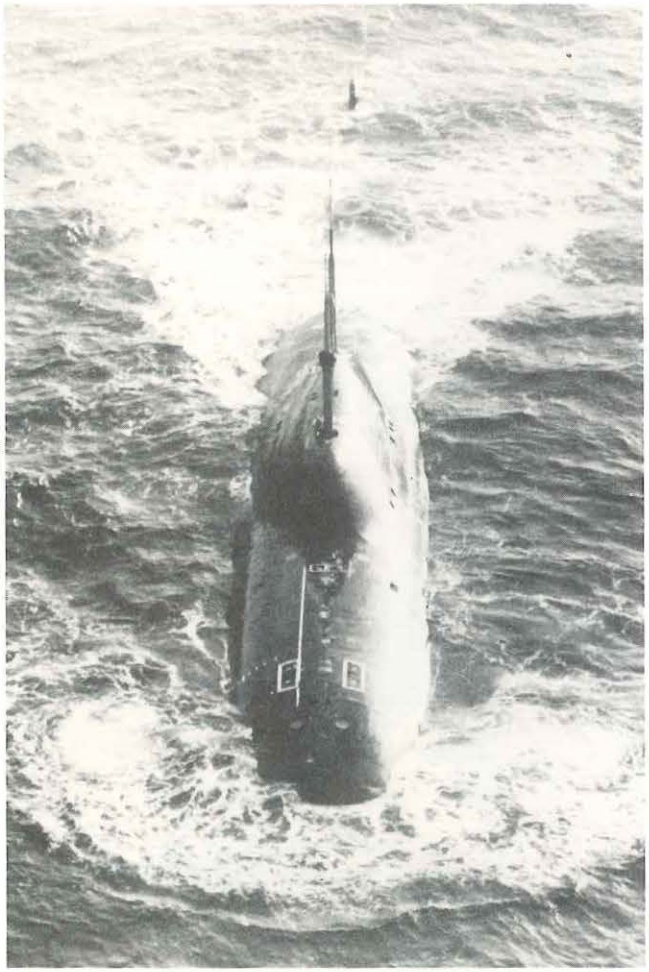
MOTORIZED RIFLE DIVISIONS	134
TANK DIVISIONS	50
AIRBORNE DIVISIONS	7

AIR DEFENSE FORCES

INTERCEPTORS	1,200
ABM LAUNCHERS	32
SAM LAUNCHERS	9,600+

NAVAL FORCES

SURFACE COMBATANTS	1,324
SUBMARINES	367
AUXILIARIES	770
NAVAL AVIATION	1,555



The Soviet Navy's nuclear-powered, deep-diving, titanium-hulled ALFA-Class torpedo attack submarine is the world's fastest, with submerged speeds of over 40 knots.

FENCER ground attack aircraft, the SS-21 short-range ballistic missile system and the 152-mm nuclear-capable, self-propelled gun. In little more than a year, Soviet forces in combat in Afghanistan have grown from 85,000 to more than 105,000. The weapon systems being used in Afghanistan are among the most modern available to the Soviet Armed Forces, including the formidable Su-25/FROGFOOT ground attack aircraft. New attack submarines, surface ships and naval aircraft further strengthen not only the USSR's theater military capabilities, but also its capability to conduct aggressive sea control and sea denial operations on the world's oceans.

Chapter IV, Soviet Space Systems, examines the serious threat posed by the USSR's increasing use of space for military purposes. The majority of Soviet space programs has been specifically designed to support terrestial military operations. However, the long-term development of an antisatellite system has extended Soviet military use of space from support operations to a direct space warfare capability. The relative scope of the overall military program is demonstrated by a launch rate that is four-to-five times that of the United States, and by an annual payload weight placed into orbit: 660,000 pounds—ten times that of the United States.

Chapter V reports on the magnitude of production and the cost of supporting the USSR's continuing military buildup. It reviews the technology and industrial resources of the USSR's defense industrial base; the effort being dedicated to research, design and test programs and the commitment to training needed scientific and engineering manpower. It summarizes the results of this effort in terms of the steady delivery of new and modernized weapon systems to Soviet forces, and in terms of future weapon systems that will be available to the forces. It examines the intensity with which the USSR pursues the acquisition of Western technology, and the overall impact of its military program on the Soviet economy. The USSR's current military capabilities reflect the achievements of a Research and Development (R&D) and industrial base that has grown steadily since the late 1950s when top priority was accorded military R&D and production. Soviet defense continues to receive regular and large infusions of capital investment allocations, legally and illegally ac-

quired foreign technology and equipment and the most highly qualified science and engineering graduates. In return, the defense industrial establishment is justifying its preferential treatment by producing a steady succession of new and improved weapon systems for the Soviet arsenal. These continuing efforts reflect the current high-priority Soviet intent and commitment to the development and production of future weapons.

The cumulative dollar costs of Soviet investment for the decade were 80 percent higher than US investment outlays. The estimated dollar costs for the Soviets were more than twice the US outlays in the mid-1970s, but, because of the slower growth of Soviet programs and growth in US costs, this margin had decreased somewhat by 1981. The slower growth of Soviet programs during the period was due to the cyclical nature of Soviet military production. The large Soviet research and development effort, coupled with observed expansion in military production facilities, suggests that the dollar costs of Soviet military procurement may soon resume their historical growth. The estimated dollar costs for Soviet RDT&E were 70 percent greater than US RDT&E outlays for the period as a whole, and were more than twice as great in 1981. The dollar operating costs for Soviet activities were about 25 percent higher both for the period and in 1981.

The illustration at the opening of Chapter VI, of a KIEV-Class aircraft carrier riding in a Japanese-built floating drydock now serving with the Soviet Pacific Fleet, symbolizes the continuing growth of the Soviet Navy, and the mounting capability of the USSR to project military power wherever required in the world. Chapter VI provides a detailed examination of the USSR's multi-tiered approach to power projection ranging from Soviet "active measures," to the use of arms sales and military advisors, the use of proxy forces, and the deployment of military forces beyond the Soviet border.

Over the past decade, the growing capability of Soviet armed forces to project power to great distances has helped the USSR to sustain and consolidate many new military outposts. This geographic expansion of Soviet influence has important military implications. The basing facilities now available to Soviet maritime forces in Cuba, Vietnam, South Yemen, Angola, Ethiopia, and elsewhere greatly extend the reach and the staying power of Soviet naval and air forces. While the Soviets' peacetime use of these bases might not translate automatically to wartime access, the potential for such access places added burden on US and Allied forces.

This expanding access to basing facilities remote from the Soviet periphery provides new possibilities for long-range projection of Soviet power. The Soviets have traditionally maintained their naval infantry and airborne forces at high levels of readiness. Since 1972, naval infantry and airborne unit training, equipment, and deployments have also been matched by comparable enhancements to Soviet airlift, sealift, and mobility infrastructure. The trend of Soviet geographic expansion is especially apparent if one recognizes that most of the Soviet Union's new military outposts are in countries that once supported the Western alliance system by providing transit rights or other facilities. Central America and the Caribbean are now clearly the target of a concerted Soviet-inspired penetration effort. Further spread of Soviet military outposts throughout the world increasingly threatens the lifelines of the Western alliances and makes it even more difficult and costly to defend essential national interests.

In Chapter VII, *Soviet Military Power 1983* assesses the challenge posed by the continued growth and modernization of the USSR's Armed Forces, and summarizes the nature of the response which the United States and its Allies must sustain to deter Soviet aggression.

II STRATEGIC FORCES





The buildup of Soviet strategic forces continues. The following introductory paragraphs outline the long-standing policies and objectives behind Soviet strategic nuclear force development and provide the backdrop for Soviet activities since the First Edition of *Soviet Military Power* was published.

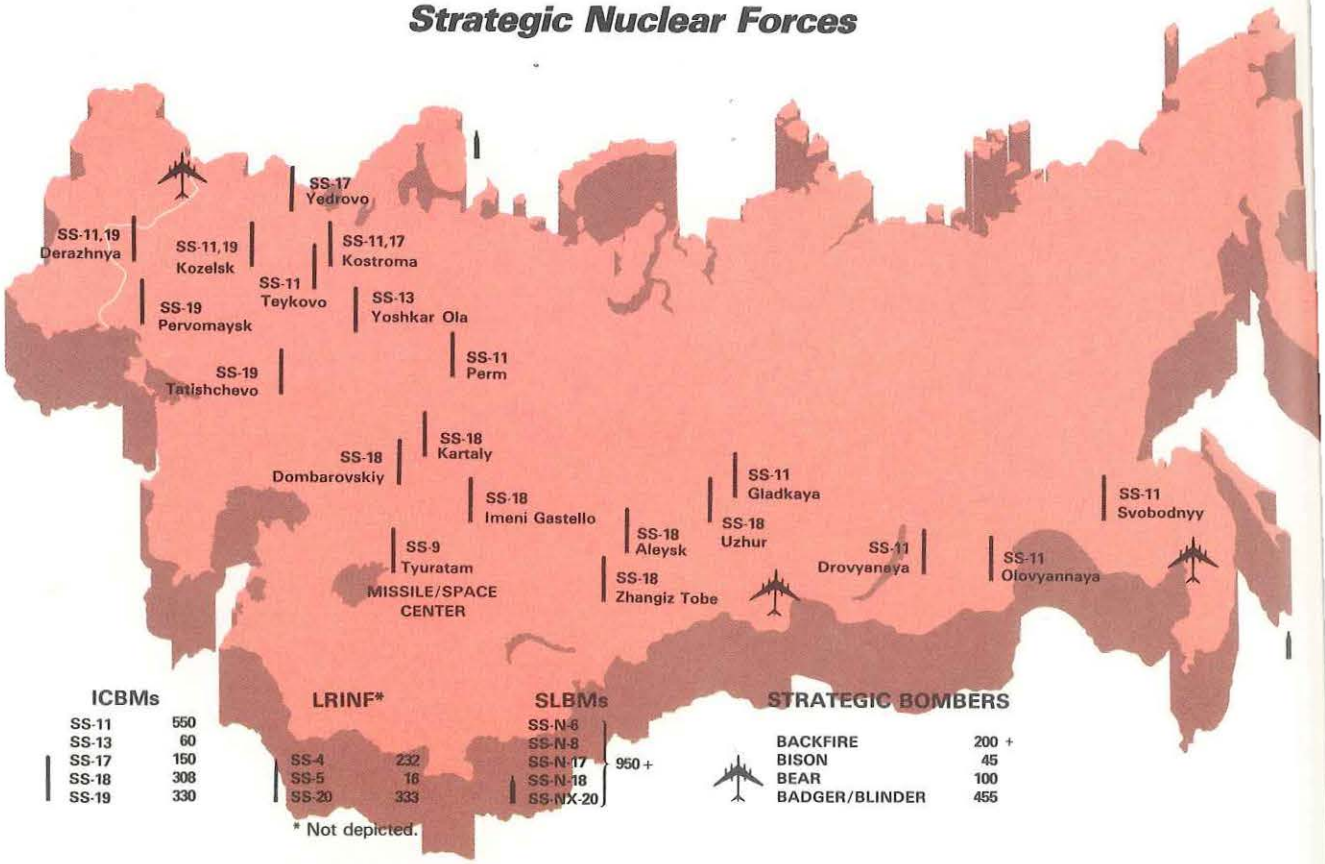
Soviet leaders since Khrushchev's time have followed a consistent policy for nuclear development. Their main objective is to capitalize, in peacetime, on the coercive leverage inherent in powerful nuclear forces, to induce paralysis and create disarray in the free societies. In wartime, they regard employment of those forces as the key to their survival and winning.

The Soviet policy calls for forces which are designed to destroy Western nuclear forces on the ground and in flight to their targets, and for the capacity to survive should nuclear weapons reach the Soviet homeland. The overall missions encompass the likelihood that intercontinental nuclear war would evolve from a general East-West conflict across the face of Eurasia. These missions are: protect the homeland, support the land war in Eurasia and eliminate the United States' capability to conduct or support warfare beyond its own shores.

Protection of the homeland is the most difficult mission. The strengths and weaknesses of Western forces determine the tasks of the offensive and defensive forces assigned to it. Hence, it is closely linked to Western weapons development programs. Because of this, the Soviets attach great importance to working hard to keep Western modernization programs to a minimum during peacetime.

With the flight-testing of the new BLACKJACK A swing-wing bomber during the past year, the USSR is nearing production of a new-generation, strategic manned bomber to add to Soviet offensive power provided by new generations of land-based and sea-based strategic ballistic missile nuclear forces.

Strategic Nuclear Forces



Protection of the homeland in a nuclear war would involve:

- disruption and destruction of the enemy's nuclear-associated command, control and communications,
- destruction or neutralization of as many of the West's nuclear weapons as possible on the ground or at sea before they can be launched,
- interception and destruction of surviving weapons—aircraft and missiles—before they can reach targets,
- protection of the party, state, and industrial infrastructure and the essential working population against those weapons that reach their targets.

The forces and programs in place or under active development designed to accomplis these tasks include:

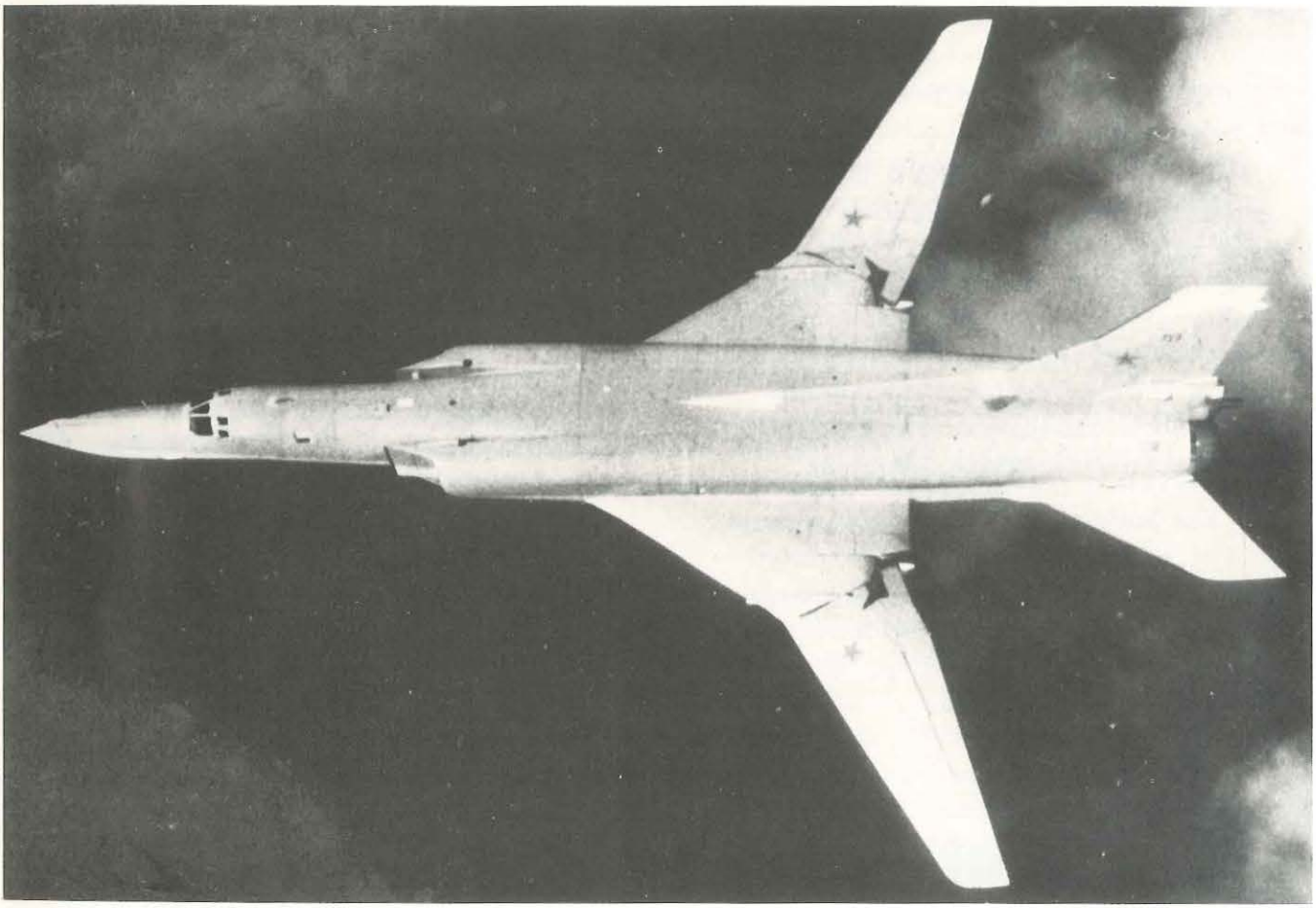
- hard-target-capable ICBMs and LRINF missiles,
- bombers capable of penetrating US defensive systems and SLBMs which can be postured for short flight times,
- antisubmarine forces capable of attacking US SSBNs,
- air and missile defenses, including early warning satellites and radars, interceptor aircraft, surface-to-air missiles, ABM radars and interceptors, and some anti-aircraft artillery,
- passive defense forces, including civil defense forces, and troops and equipment devoted to confusing incoming aircraft,

- hardened facilities numbering in the thousands, command vehicles, and evacuation plans designed to protect party, military, governmental, and industrial staffs, essential workers and, to the extent possible, the general population.

Supporting a land war in Eurasia and eliminating the United States' capability to fight beyond its own shores require a capability to employ intercontinental forces useful over a variety of ranges and the destruction of:

- other military-associated command and control,
- war-supporting industries, arsenals and major military facilities,
- ports and airfields in the United States and those along sea and air routes to European and Asian theaters of war, and
- satellite and ground-based surveillance sensors and facilities and communications.

Offensive forces (ICBMs, LRINF, SLBMs, and bombers) and antisatellite weapons are generally assigned these tasks although some special operations troops could be used, es-



The BACKFIRE Bomber, Capable of Nuclear Strike, Conventional Attack, Anti-shipping, and Reconnaissance Missions.

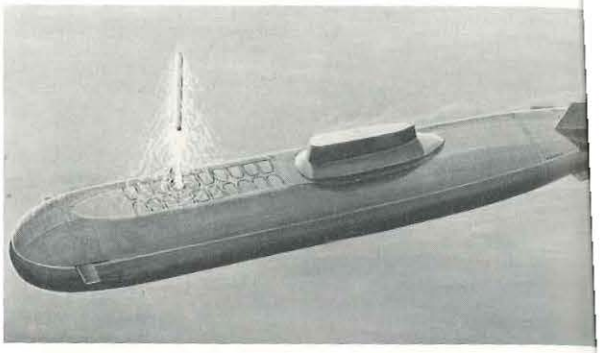
pecially in Eurasia. These tasks are generally less demanding than those for the first mission.

Soviet intercontinental forces are designed to fulfill their missions under the best and worst of circumstances. In the Soviet view, the most favorable circumstance is a first or preemptive strike; the least favorable is a follow-on strike after nuclear weapons have hit the USSR. In between is the launch-under-attack circumstance: that is, executing offensive forces after weapons aimed at the USSR have been launched but before they hit their targets. The Soviets have wide-ranging programs designed to provide nuclear forces able to operate under each of these circumstances. Moreover, the Soviets appear to believe that nuclear war might last for weeks, even months, and have factored this into their force development.

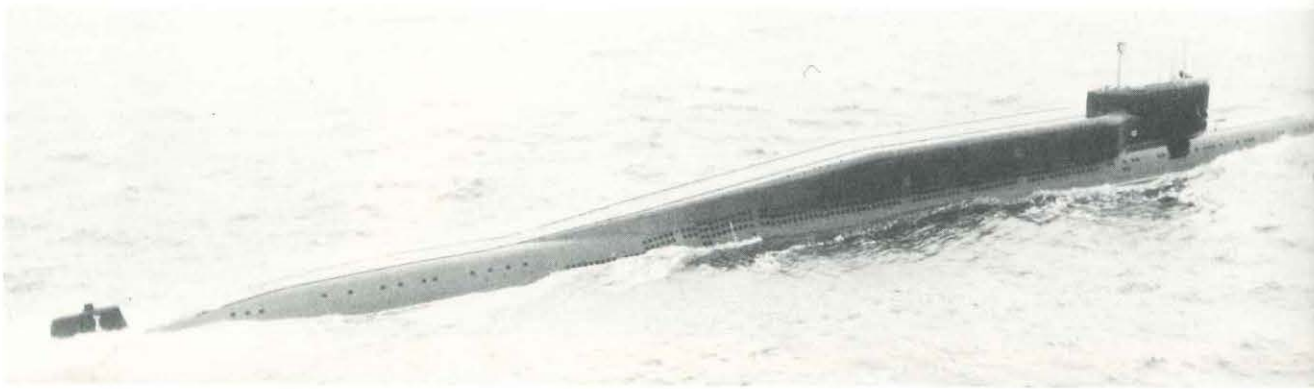
- In a first or preemptive strike, the essentials are effective coordination of the strike and sound intelligence of the West's intentions. Soviet nuclear forces practice almost constantly, emphasizing command and control under various conditions. During wartime, the main mission of Soviet intelligence is to determine the West's nuclear attack intentions.

- The Soviets practice launching weapons under the stringent time constraints that would prevail under hypothetical launch-under-attack circumstances. They have established a satellite-based ICBM launch detection system, have built an over-the-horizon radar missile launch detection system to back up the satellites, and have large phased-array radars ringing the USSR.

- Follow-on strikes stress the survivability of the command, control and communications systems and that of the weapons themselves. The Soviets have invested heavily in providing this survivability. The SS-17, SS-18, and SS-19 ICBMs are housed in the world's hardest silos. Silo deployment has been adopted for ABMs



25,000-ton TYPHOON-Class SSBN firing SS-N missile.



DELTA III-Class SSBN



YANKEE-Class SSBN

as well. The SS-20 LRINF missile is mobile, and a mobile strategic SAM is being developed. The launch control facilities for offensive missiles are housed in very hard silos or on off-road vehicles. Communications are redundant and hardened. Higher commands have multiple hardened facilities and mobile command vehicles and aircraft available for their use. Bombers have alert procedures and dispersal airfields. Ballistic missile submarines can be placed in tunnels near their home ports, submerged in deep fjords just off their piers, dispersed and protected by Soviet surface and submarine forces.

- The Soviet belief that war might be protracted requires the survivability needed for follow-on strikes, along with war reserves, protection for people and equipment, and the capacity to reload launchers. For their ICBM, LRINF and air defense forces, the Soviets have stocked extra missiles, propellants, and warheads throughout the USSR. ICBM silo launchers can be reloaded in a matter of days, and provision has been made for the decontamination of those launchers. Plans for the survival of necessary equipment and personnel have been developed and practiced. Resupply ships are available to reload Soviet SSBNs in protected waters.

Despite these comprehensive warfighting objectives and ambitious development and deployment programs over the years, the Soviets are continuing to modernize all aspects of their strategic forces.

Much of what the Soviets have done since September 1981 involves the consummation of programs begun in the 1970s and offers the first signs of new programs designed to help remedy weaknesses still remaining and to allow them to attain their own objectives in the face of prospective Western programs.

Older programs:

- replacement of older missiles with SS-19 Mod 3 and SS-18 Mod 4 MIRVed ICBMs, the world's most lethal ICBMs,
- construction of DELTA III SSBNs, fitted with 16 SS-N-18 MIRVed SLBMs, with YANKEE and HOTEL SSBNs dismantled in compensation,
- continuation of the SS-NX-20 MIRVed SLBM testing program (The TYPHOON/SS-NX-20 weapon system will become operational in 1983.),
- continued production of BACKFIRE bombers,
- further deployment of the SA-10 low-altitude SAM around Moscow and throughout the USSR,
- initial production of the Il-76/MAINSTAY airborne warning and control systems (AWACS),
- continued development of a high-speed ABM interceptor and a modified version of the older GALOSH ABM interceptor,
- additional construction of large phased-array radars around the periphery of the USSR,



SS-11 ICBM

• continued construction of hardened shelters and command posts for passive defense.

New programs since 1981:

• first tests of a new solid-propellant ICBM similar in size and payload to the US MX,

• the first test of a new small solid-propellant ICBM, which could be deployed on mobile transporters,

• preparations to begin testing other new ICBMs, probably in 1983,

• development of a series of long-range cruise missiles intended for ground, air and sea launch platforms,

• preparations to begin testing another new SLBM, probably in 1983,

• the first flight tests of the new BLACKJACK strategic bomber,

• new ABM deployment around Moscow to include a new, very large phased-array radar and deployment of new ABM interceptors,

• testing of high-energy laser systems for land-based and sea-based air defense,

• Testing of a mobile version of the SA-10 SAM,

• the initial deployment of the FOXHOUND interceptor which can identify and track targets flying far beneath it and fire air-to-air missiles against those targets,

• testing of two additional new air defense interceptor aircraft.

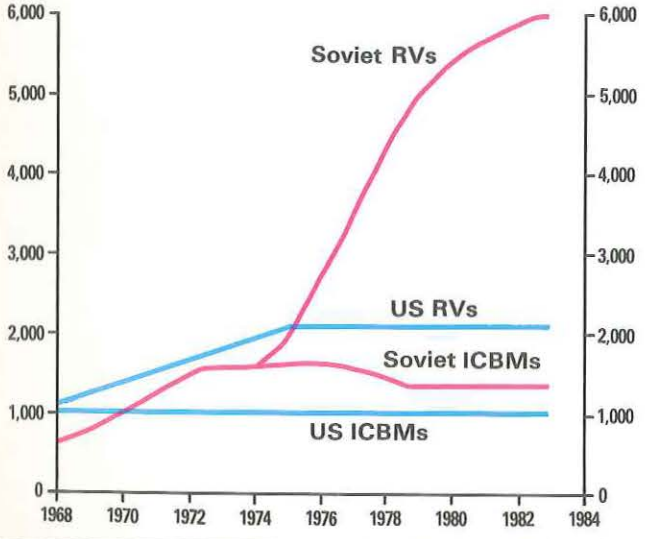
While these efforts have continued, the Soviet leadership has also been directing an active measures campaign to support and amplify ongoing anti-nuclear movements in the West, in order to influence, delay, or frustrate Western nuclear program developments. Using this two-pronged approach, Moscow seeks a new gain in relative capability despite the drive of Western governments to redress the imbalance which has developed over the past decade.

INTERCONTINENTAL ATTACK

Since the late 1950s, the Soviets have developed and deployed nuclear attack forces having two fundamental capabilities: strikes against enemy nuclear arsenals and command and control systems and support of land warfare in Eurasia. While the character, composition, and technical sophistication of the forces have changed over the years, the missions have not. The development of capabilities to satisfy the missions has been done with patience and pur-

pose derived from a realization that not all goals can be achieved at once. ICBMs have the mission to attack the ICBM force of the United States and other hardened targets. ICBMs and SLBMs are earmarked for strikes against communications, command and control systems and against the defense infrastructure of the United States. Some ICBMs and SLBMs may have been designated as strategic reserves. All of the forces must operate in a variety of environments. Bombers have become a supplementary force for ICBMs and SLBMs. Finally, the majority of the systems have been designed to be capable for use not only at intercontinental ranges against the United States but also at shorter ranges against targets throughout Europe and Asia.

US and Soviet ICBM Launcher and Reentry Vehicle (RV) Deployment 1968-1983

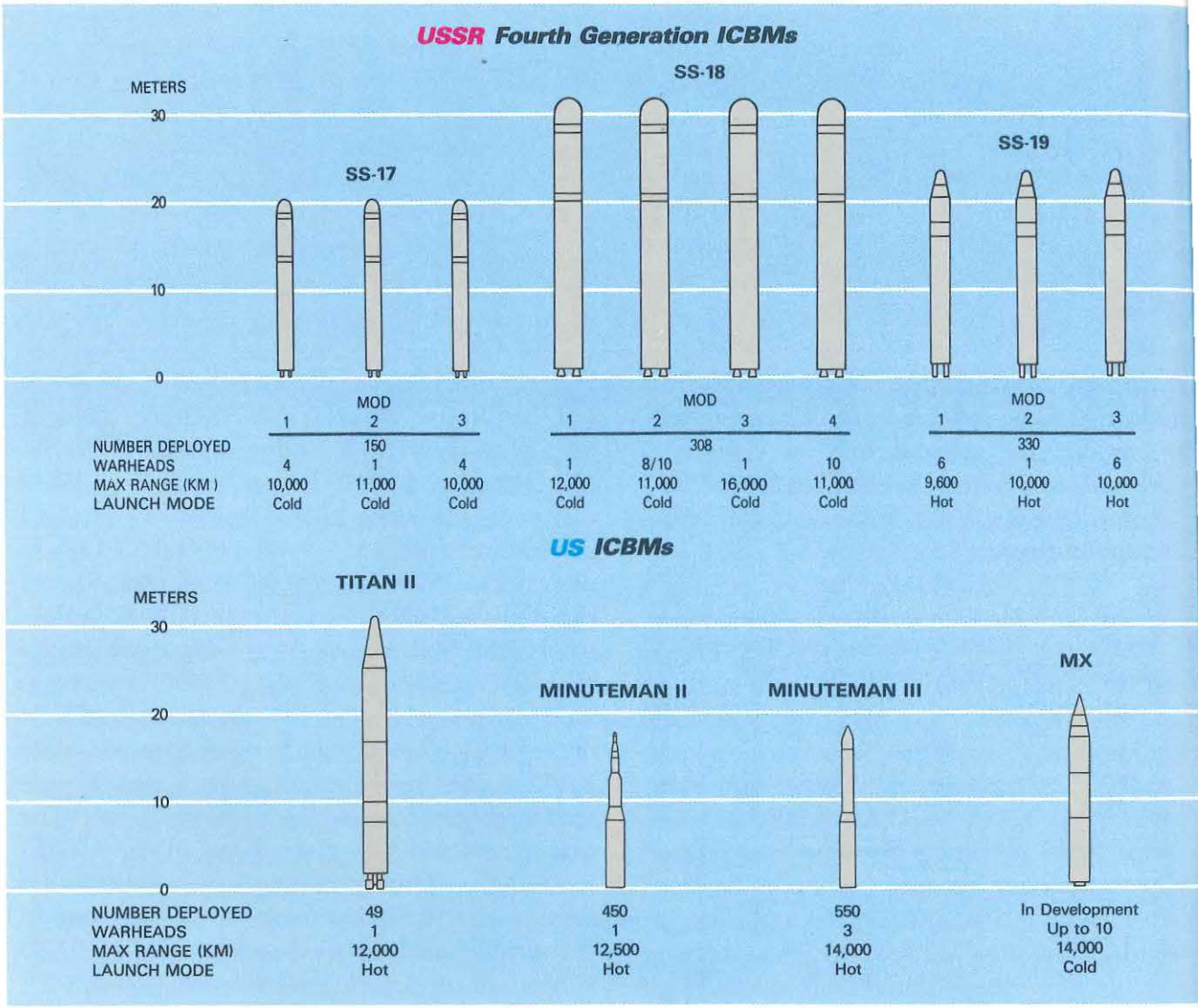


ICBMS: The Soviet ICBM force has been developed and deployed in four successive generations, each representing significant advances. The Soviet ICBM force currently consists of 550 SS-11s, 60 SS-13s, 150 SS-17s, 308 SS-18s, and 330 SS-19s. These missiles carry some 6,000 nuclear warheads. Presently, the great majority of the 17s, 18s and 19s are equipped with MIRVs. By the mid-1980s the Soviets are expected to complete their current ICBM modernization programs for fourth-generation systems. At that time, they will have 520 SS-11s, 60 SS-13s, 150 SS-17s, 308 SS-18s, and 360 SS-19s. When this deployment is finished, the force will have some 6,400 warheads.

ICBM improvements may be measured in terms of quantity, quality and survivability.

Quantitative Improvements: Deployment of the Soviets' first (SS-6) and second (SS-7 and SS-8) generation ICBMs began in the late 1950s and early 1960s. By 1966, deployment of third generation missiles (SS-9, SS-11, and SS-13) was underway. With this generation, the Soviets rapidly increased the number of ICBMs deployed. ICBM deployment reached its peak in the mid-1970s at approximately 1,600 launchers. After this, the number of launchers gradually decreased to the current level of approximately 1,400 as the Soviets removed their less-capable second generation missiles from the force. (The first generation was phased out in the 1960s.) From 1975 to the present, however, there has been a dramatic increase in the number of deliverable nuclear warheads as the MIRVed versions of the fourth generation ICBMs (SS-17, SS-18, and SS-19) have been deployed. Since these missiles can carry up to 10 reentry vehicles (RVs), the number of deployed ICBM nuclear warheads has increased by a factor of four, not withstanding the reduction in the number of SALT-accountable launchers.

Qualitative Improvements: The dramatic growth in nuclear warheads observed after 1975 could not have been possible without major qualitative improvements. The first two generations of Soviet ICBMs were inaccurate, carried relatively small payloads and required lengthy



launch procedures. To make up for these deficiencies, reentry vehicles were fitted with high-yield nuclear weapons. With the third generation, both accuracy and payload capability were improved to some degree. However, it was not until the fourth generation that the technology became available to the Soviets allowing greater throw weight and greatly improved accuracy so that high-yield MIRVs could be carried by operational missiles. The most accurate versions of the SS-18 and SS-19 are capable of destroying hard targets. T gether, these systems have the capability to d stroy most of the 1,000 US MINUTEMA ICBMs, using only a portion of the warhea available. The Soviets follow an increment improvement policy in the development of th forces. They improve those components of weapon system that need improving and reta those portions that are satisfactory. In this ma ner, they have greatly improved the reliabil and capability of their current ICBM force.

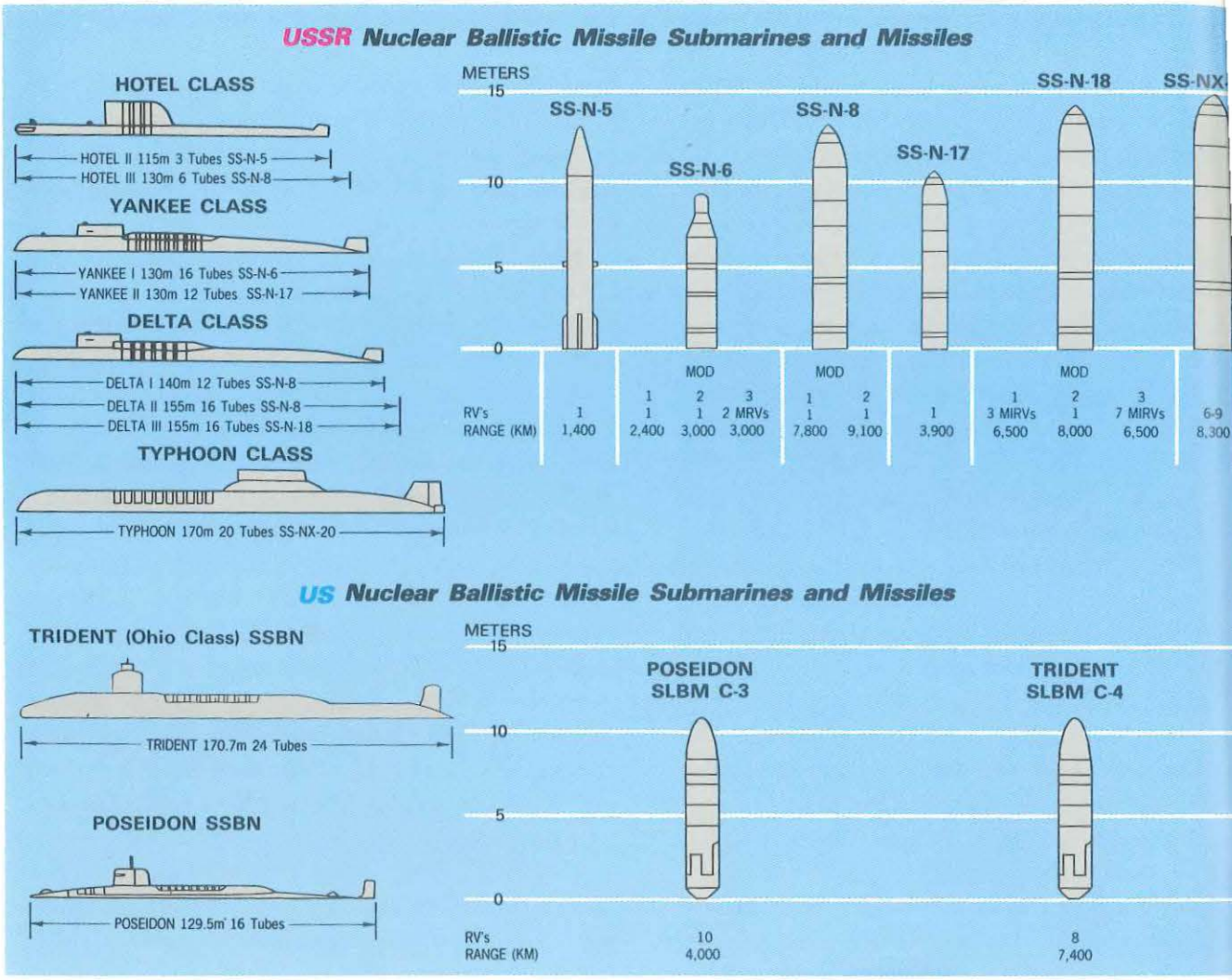
Survivability Improvements: One of the most important improvements made in the ICBM force has been in the area of survivability. Most of the first- and second-generation ICBMs were deployed on above-ground launchers with no real protection for the launcher or the missile. During the deployment of the second-generation missiles the Soviets began to deploy missiles at sites containing three underground silo launchers. Third-generation missiles were deployed in hardened, underground, single-silo sites. By using hardened and widely-dispersed launchers the Soviets increased the ICBM force survivability. The fourth-generation ICBMs were placed in launchers that, for the most part, had been converted from third-generation silos. In the process of conversion, the hardnesss of the launchers was considerably increased to improve missile and launcher survivability, upgraded communications facilities were added, and silo-based launch control facilities were built. The Soviets have also undertaken several programs to modernize and upgrade launchers for their third-generation ICBMs. The result is that the current Soviet ICBM force is vastly more survivable than was the case a decade ago.

ICBM Reload Capability: The Soviets have contingency plans for reloading and refiring ICBMs from launchers that already have been used to fire an initial round. The cold-launch technique employed by the SS-17 and SS-18 lends itself to such a reload capability. Additionally, all currently deployed liquid-propellant ICBMs—SS-11, SS-17, SS-18 and SS-19—are contained in a launch canister within the silo. This and the silo design minimize damage to the launcher during the initial firing and give the Soviets the capability to reload each of these launchers. The Soviets probably cannot refurbish and reload silo launchers in a period less than a few days; nevertheless, they believe that this capability is of significant value because they anticipate that a nuclear war might be protracted. The Soviets have made provisions for the delivery of reserve missiles, warheads and propellants to ICBM complexes for reload purposes. None of these extra missiles or warheads are counted under SALT agreements. Only the launchers are counted.

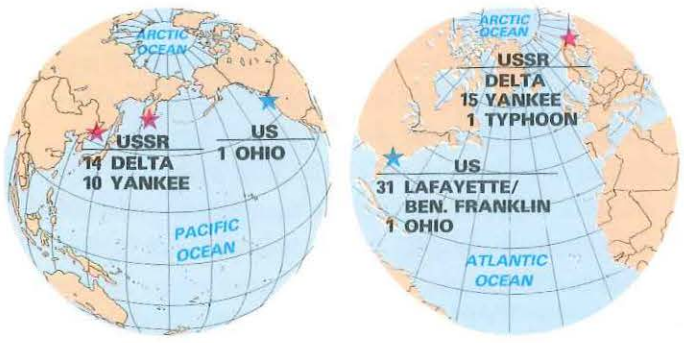
New ICBMs Under Development: Soviet ICBMs will continue to emphasize the force improvements that have been observed since the early 1960s: accuracy, MIRVing, reliability, and survivability. Two new solid-propellant ICBMs are currently being developed. One of these is about the size of the US MX intended for silo deployment; the other is a smaller missile, which will probably be designed for deployment on mobile launchers similar to those used with the SS-20. Because of their capability for dispersal, mobile missiles are highly survivable. Furthermore, they have an inherent reload capability, which is also a significant force improvement. Testing programs for one or two additional ICBMs, probably based on the SS-18 and SS-19, are expected to begin in 1983.

SSBNs/SLBMs: Over the last two years the Soviets have continued to modernize their submarine launched ballistic missile (SLBM) force. A second TYPHOON-Class nuclear-powered ballistic missile submarine (SSBN) has been launched at the Severodvinsk Shipyard; the first TYPHOON completed its sea trials and has moved to port facilities on the north coast of the Kola Peninsula. Armed with 20 launchers for the MIRVed SS-NX-20 solid-fueled SLBM, the first submarine of this class will be fully operational by the end of 1983. The range of the SS-NX-20, 8,300 kilometers, places all of NATO Europe, North America and Asia within TYPHOON's reach.

While the TYPHOON SSBN production program is still relatively new, the Soviets' earlier



Modern SSBN Deployments



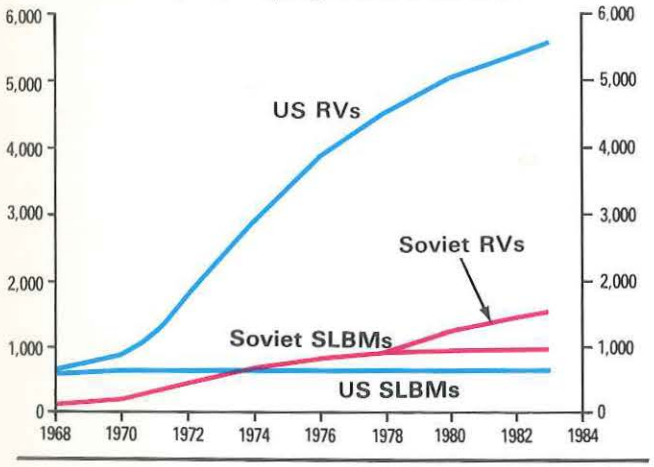
DELTA-III program is nearing completi
Thus far, 14 of these SSBNs have been laun
ed; a few more will probably be built. Each c
ries 16 liquid-fueled MIRVed SS-N-18 SLBI

Like the TYPHOON, the missiles on
DELTA-III, as well as the DELTA I and II, c
reach targets in almost all of North Amer
from home waters. By contrast, only the TI
DENT C-4 has similar range capabilities. Ho
ever, the bulk of US SLBMs is much less ca
ble in terms of range, accuracy and yie
Therefore, the quantitative US advanta

shown in the chart below should not mislead.

With the addition of each new SSBN, the Soviet Navy has dismantled older submarines in order to remain within the number of launchers (950) and number of hulls (62) allowed under provisions of the SALT-I Agreement, as extended. The addition to the force of some 200 reentry vehicles (RVs) on each TYPHOON, however, greatly eclipses the temporary reduction caused by the dismantlement of one YANKEE-Class SSBN (48 RVs) and of two HOTEL-II Class SSBNs (6 RVs) in compensation for a newly constructed TYPHOON. The acquisition of each new SSBN equipped with SS-N-18/SS-NX-20 SLBMs not only introduces more RVs but also allows the Soviets greater flexibility in the use of their new submarines. Older SSBNs with shorter-ranged SLBMs have to conduct lengthy transits in order to come within range of targets in North America.

US and Soviet SLBM Launcher and Reentry Vehicle (RV) Deployment 1968-1983

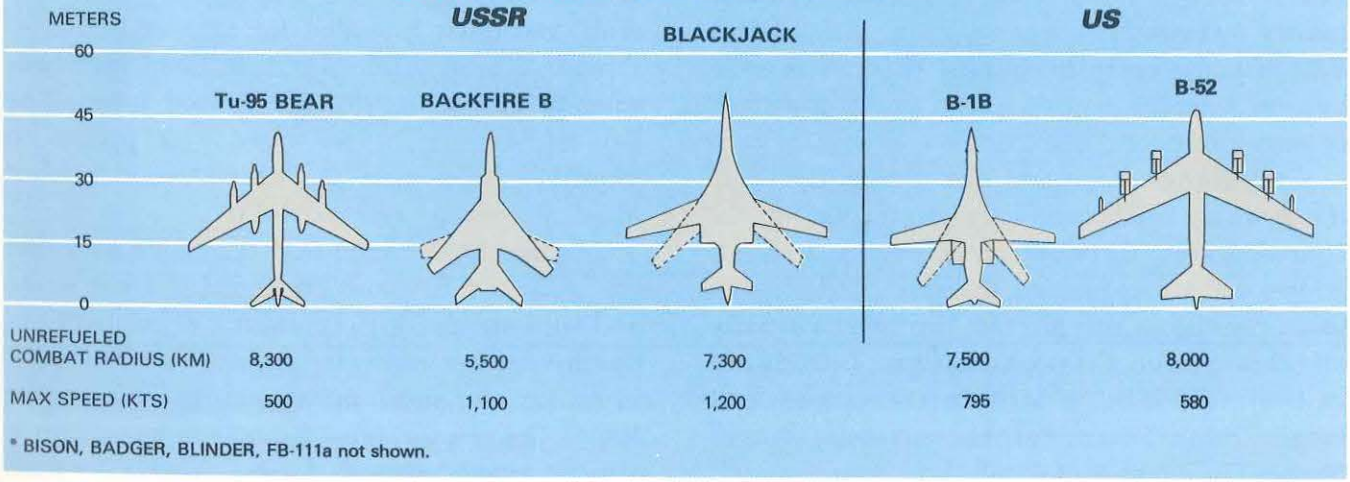


Future developments in Soviet SLBMs will most likely center on improved RV accuracy to complement their estimated large nuclear yields and on the fielding of solid-fueled SLBMs as replacements for older liquid-fueled versions. A new SLBM, possibly intended to replace the SS-N-18, probably will begin testing in 1983.

Apart from its SLBMs, the Soviet Navy will soon be the recipient of a sea-launched cruise missile (SLCM) that is currently under development, the SS-NX-21. With an estimated maximum range on the order of 3,000 kilometers, its mission is primarily nuclear strike, and its size is compatible with submarine torpedo tubes.

Bombers: The manned bomber has relinquished primary responsibility for nuclear attack to missiles, but the Soviets still view it as a

USSR and US Long-Range Strike Aircraft*



* BISON, BADGER, BLINDER, FB-111a not shown.

viable component of their nuclear forces. The manned bomber provides them flexibility and diversity in their nuclear attack forces not available with ballistic missiles. Moreover, the Soviets clearly are prepared to use bombers in a variety of roles, to include conventional strikes in the European and Asian theaters, antiship operations, reconnaissance and nuclear operations in a protracted conflict.

Continuing Soviet interest in the manned bomber is evidenced by the number of programs underway to upgrade the aging force, including the development of a new strategic bomber and long-range air-launched cruise missiles. Moreover, sweeping organizational changes in the command structure of the Soviet air forces are in part intended better to integrate bombers into all types of air operations.

Deployment Trends: The current strategic bomber force consists of almost 900 strike and support aircraft. The overall size of the force has remained relatively constant in recent years, although modernization of the BACKFIRE and upgrades in weapons have improved the quality. Three-fourths of the bombers are positioned opposite NATO, while the remainder are based along the Chinese border. BADGER, BLINDER, and BACKFIRE make up the bulk of the force and would carry out missions primarily against Europe and Asia. BEAR and BISON could perform similiar missions as well, but are reserved mainly for strategic maritime or intercontinental operations.

Long-Range Bombers: The Tu-95/BEAR is the primary intercontinental air threat to the United States. Capable of delivering free-fall bombs or air-to-surface missiles, under optimum conditions this aircraft can cover virtually all US targets on a two-way mission. Introduced in the mid-1950s, it is both the largest and longest-range Soviet bomber currently operational. The range and flexibility of some models can be further increased with mid-air refu
Six variants of the BEAR have been prod
three for strike missions, two for recor
sance, and one for antisubmarine warfare
antisubmarine warfare variant has continu
production in 1982.

Complementing the BEAR in intercont
tal operations, the M-type/BISON is a
engine, swept-wing, turbojet-powered bo
capable of delivering free-fall bombs. Abo
are still configured as bombers, while son
have been modified as air refueling tanker

The Tupolev BACKFIRE is the latest
tion to the currently operational str
bomber forces. Introduced in 1974, som
are deployed with the Soviet Air Force, w
like number assigned to Soviet Naval Avia
Production of the BACKFIRE continues
rate of 30 per year. Most are based i
western USSR, although over the last few
the Soviets have deployed a sizable numb
the Far East.

The BACKFIRE is a long-range aircraf
able of performing nuclear strike, conven
attack, antiship, and reconnaissance mis
Its low-level penetration features make
much more survivable system than its pre
sors. Carrying either bombs or AS-4/KITC
air-to-surface missiles, it is a versatile strik
craft, currently intended for theater atta
Europe and Asia but also capable of inte
tinental missions against the United States
BACKFIRE can be equipped with prob
permit inflight refueling, which would fu
increase its range and flexibility.

Intermediate-Range Bombers: The ove
Tu-16/BADGER and Tu-22/BLINDER
and support aircraft represent a significa
pability for use in theater attack. The BAI
is by far the most numerous aircraft i
force. The ten variants of this twin-jet, su
aircraft have expanded its mission b

Blackjack and Backfire Coverage from Soviet Bases
(2-Way Missions)



standard bombing to include electronic countermeasures, air-to-surface missile delivery, reconnaissance, and refueling. The swept-wing, supersonic BLINDER has been deployed in free-fall bomber, air-to-surface missile carrier, reconnaissance and trainer versions. The

BADGER and BLINDER, in conjunction with BACKFIRE, form a potent force for air operations against NATO and the nations of Asia.

New Bomber Developments: Until the introduction of the BACKFIRE, the most glaring weakness in the Soviet bomber force was the age of the aircraft. However, as early as the middle 1980s, major improvements are expected which will give new life to the force and significantly enhance Soviet long-range bomber and cruise missile attack capability.

A new strategic bomber, designated the BLACKJACK A by NATO, is currently under development. The BLACKJACK is a large, variable-geometry-wing aircraft. It will be capable of long-range subsonic cruise with supersonic high-altitude dash and subsonic/transonic low-level penetration. This new bomber is like be a multiple-role aircraft that could de both free-fall bombs and air-launched cr missiles to intercontinental range. The BLA JACK could be introduced to the operati force as early as 1986 or 1987.

The Soviets are developing at least one lo range air-launched cruise missile (ALCM) v a range of some 3,000 kilometers. Carried the BACKFIRE, the BLACKJACK and poss the BEAR, it would provide the Soviets v greatly improved capabilities for low-level standoff attack in both theater and interc tinental operations. ALCMs could be in operational force by the mid-1980s.

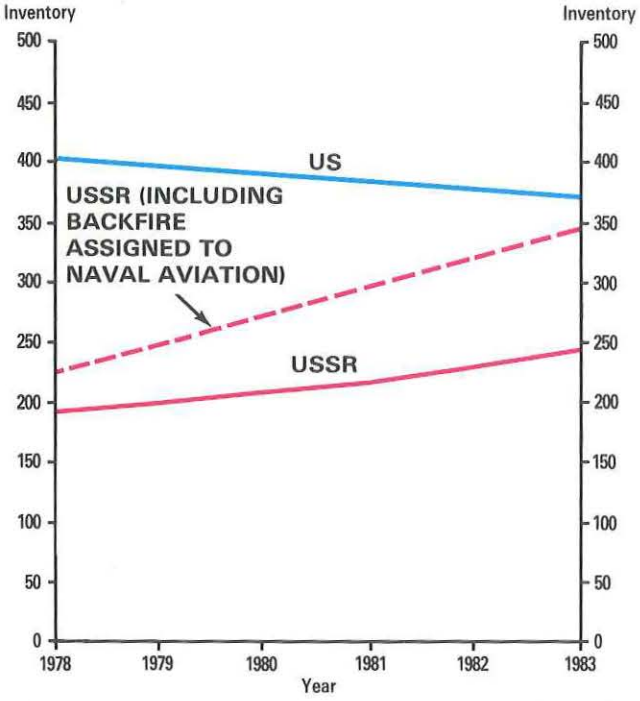
A new aerial refueling tanker based on the 76/CANDID has been under development several years. If operationally deployed, the n tanker could support either tactical or strate aircraft and would significantly improve ability of Soviet aircraft to conduct long range operations.

US Strategic Deterrent Forces: By mid-19 US strategic deterrent forces will consist of:

- 1,000 MINUTEMAN ICBMs
- 43 TITAN ICBMs
- 241 B-52G/H model bombers
- 56 FB-111 bombers
- 496 POSEIDON (C-3 and C-4) Fleet Ballistic Launchers
- 72 TRIDENT Fleet Ballistic Launchers

The US force structure dates from the 196 The TITAN ICBMs and the B-52D-mo bombers are being retired in view of their and declining military effectiveness. The B-5 is scheduled for retirement this year and TITANs by 1987. The aging B-52G/H bomb will not be capable of effectively penetrating Soviet air defenses in the mid-1980s. The MI UTEMAN force is increasingly vulnerable t Soviet ICBM attack.

US and USSR Intercontinental-Capable Bombers[1]



[1] US data include B-52, FB-111a; Soviet data include Soviet Air Force, BEAR, BISON, and BACKFIRE.

To redress the imbalances and US force vulnerabilities which have resulted from the Soviet drive for strategic superiority, the United States has initiated a comprehensive and integrated strategic modernization program. In the area of US strategic retaliatory forces this program includes:

- Deployment of more survivable and effective command, control, and communications systems,
- Development of the new TRIDENT-Class submarine-launched ballistic missile and continued procurement of TRIDENT-Class submarines,
- Procurement of 100 B-1B bombers in the near-term and deployment of the Advanced Technology Bomber (ATB) for the 1990s. Similarly, selected B-52 bombers are being modernized and the air-launched cruise missiles (ALCM) introduced into the force,
- Deployment of the new PEACEKEEPER (MX) land-based missile as soon as possible.

Other Nuclear Forces: China maintains its own long-range nuclear force, which is not part of any alliance. In planning for theater operations, the Soviets take this force into account.

Nuclear forces in Europe include four United Kingdom submarines carrying 64 POLARIS A-3 missiles. The POLARIS missiles themselves are being modified to upgrade warhead survivability and effectiveness on target. Plans call for replacement of the POLARIS SLBM, but this program is not scheduled until the 1990s. France also maintains both land-based intermediate-range nuclear forces and submarines with ballistic missiles.

STRATEGIC DEFENSE FORCES

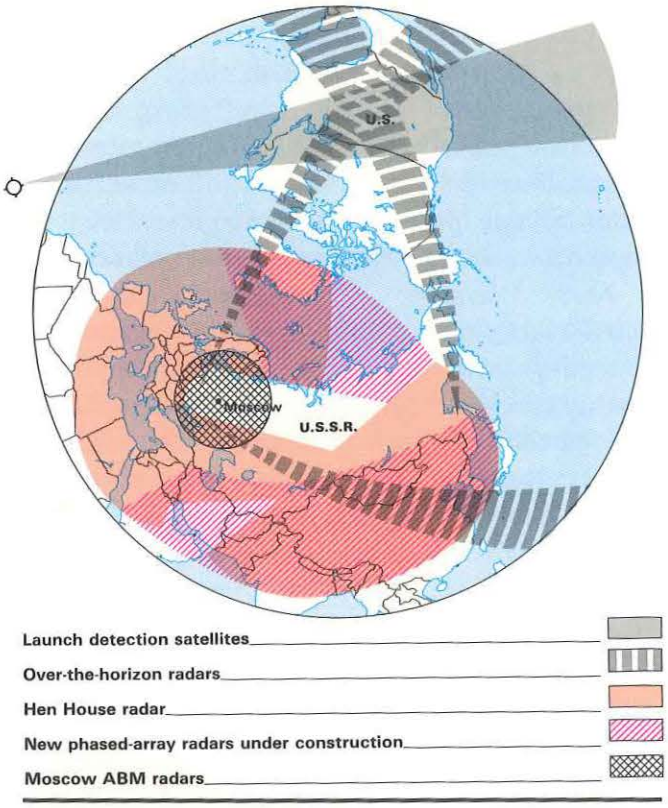
Since the end of World War II, the Soviets have built and maintained the world's largest strategic defense force. It includes active defenses such as interceptor aircraft, surface-to-air missiles (SAMs) and antiballistic missile (ABM) and passive defenses such as surveillance and warning systems, hardening, electronic countermeasures (ECM), and civil defense. When combined with the strong counterforce orientation of Soviet strategic offensive forces, these efforts point to a strategic concept of layered, in-depth defense of the homeland.

Early Warning: The Soviets have about 7,000 radars throughout the USSR dedicated to detecting and supporting the engagement of enemy aircraft. The Soviets have steadily improved their ability to overcome the many difficulties associated with providing air warning for such a large country. The chief improvements are the continued development of an Airborne Warning and Control System (AWACS) aboard the Il-76/CANDID airframe, which could begin deployment soon, and the deployment of many new types of ground-based air warning radars and control systems.

For detecting and tracking ballistic missiles, the Soviets have a redundant system of sensors. The first layer is the large over-the-horizon (OTH) radars that can detect the launch of US and Chinese ICBMs. These have been supplemented recently by a launch detection satellite system. The second layer is the network of HEN HOUSE radars near the borders of the USSR. The Soviets have made a major commitment to improving this network by building new phased-array radars on the borders. These large radars, about the size of a football field set on edge, take years to complete. When finished, they will close gaps in HEN HOUSE radar coverage and provide Soviet leaders with better information about the size and objectives of any enemy missile attacks.

Ballistic Missile Defense: In conjunction with ballistic missile detection and tracking systems,

Coverage of Ballistic Missile Detection and Tracking Systems



the Soviets maintain at Moscow the world's only operational antiballistic missile (ABM) system. The Moscow defenses currently include battle management radars and four launch complexes containing engagement radars and ABM-1B/GALOSH interceptor missiles. The system cannot presently cope with a massive attack, however, and the Soviets have continued to pursue extensive ABM research and development programs, including a rapidly deployable ABM system and improvements for the Moscow defenses.

Some of these ABM developmental programs are coming to fruition, as the Soviets are in the process of upgrading the Moscow ABM defenses. They are building additional ABM sites and are retrofitting sites with new silo launchers. To support these launch sites, the Sov are building the new ABM radar in the Mosc area shown in the illustration opening Chapt of this report. It is a phased-array radar w 360 degree coverage, somewhat like the Mis Site Radar from the now defunct US SA GUARD ABM system, although the Mosc radar is about twice as large. These impro ments to the Moscow defenses, which could completed by the mid-1980s, are allowed by t 1972 ABM Treaty as long as the number launchers does not exceed 100.

Air Defense: Soviet air defenses are the m massive in the world. They include an extensi variety of aircraft and missile weapon syste with mutually supporting capabilities. Heavi concentrations are in the European USSR a the military/industrial areas east of the Ura Qualitatively improved weapon systems are b ing developed and will continue to be introdu ed into the force.

The Soviet air defense system should not confused with those employed by client stat using some Soviet equipment. No Soviet clie state has been provided with anything compa able to the highly integrated Soviet air defen system. Examples of the failure of air defens in those states when faced with attacks by fir line aircraft should not be used to judge Sovi air defense capabilities.

Aircraft: Evolutionary changes continue the interceptor force. Approximately 600 mo ern, strategic air defense interceptors with least some ability to engage low-altitude targ now make up half of the force. The Soviets ha been converting FOXBAT A aircraft, origina designed to counter high-altitude threats, FOXBAT E, giving them limited low-altitu capabilities somewhat comparable to FLO GER. The Soviets have begun deployment the FOXHOUND A, their first interceptor wi a true look-down/shoot-down capability. T



MiG-25/FOXBAT E Interceptor.

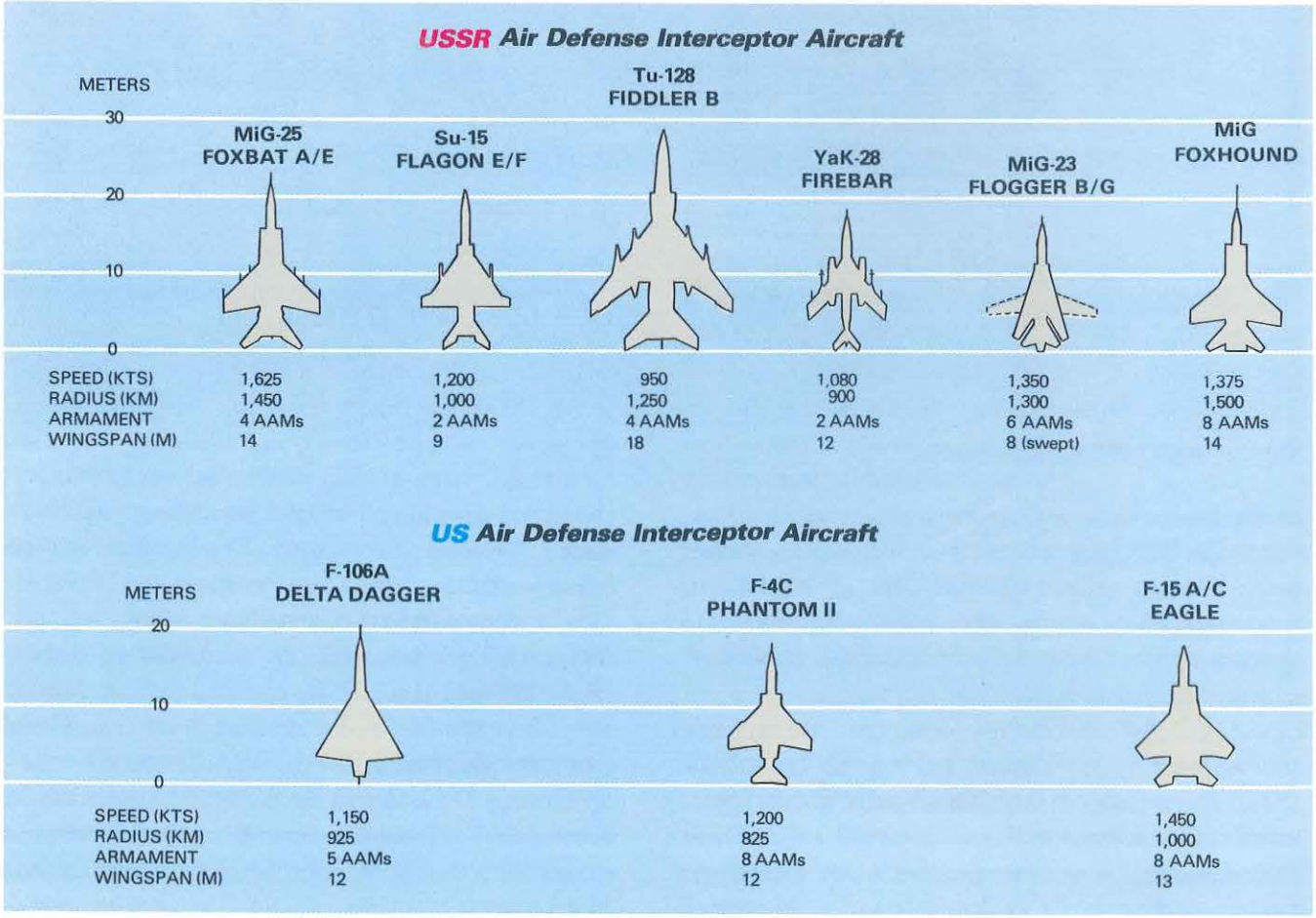
more look-down/shoot-down fighters are currently in development and should enter service soon. As these three types of aircraft replace or augment older types, the Soviet capability to defend against low-altitude aircraft, including cruise missiles, will increase.

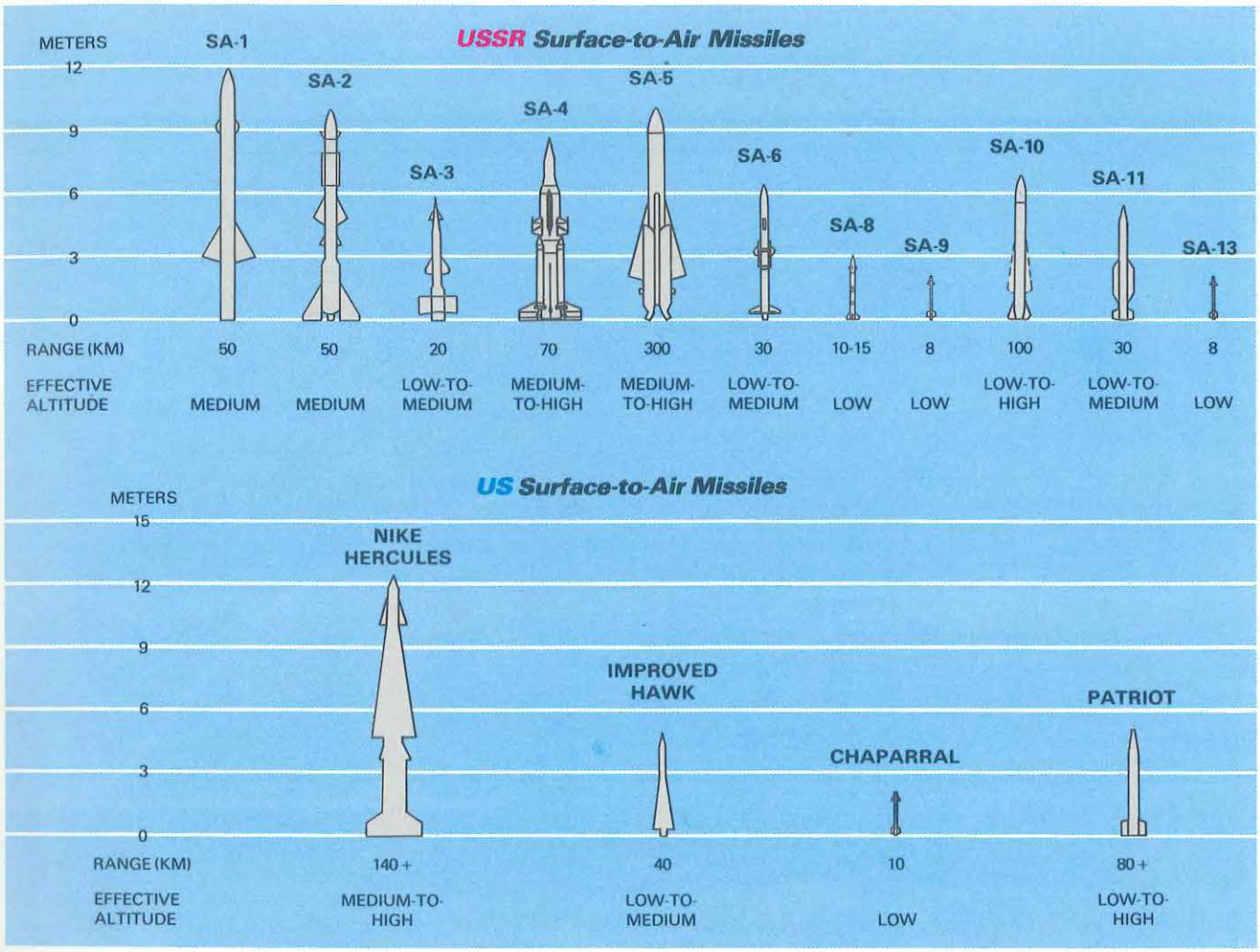
SAMs: As in the interceptor force, improvements in the Soviet surface-to-air missile (SAM) force are continuing. Again, the primary emphasis appears to be a counter to low-altitude targets. Newer systems demonstrate longer range, particularly at low altitude; improved mobility; increased target handling capability and increased firepower. Deployment of the SA-10 system, which can engage multiple aircraft and possibly cruise missiles at any altitude, has steadily increased. In addition to deployment around the USSR, the system is replacing the 30-year-old SA-1s around Moscow. Development of a mobile SA-10 is underway.

Passive Defense: The Soviet Ministry of Defense controls the nationwide civil defense programs of the USSR. The Chief of Civil Defense is a Deputy Minister of Defense and general of

the army. Full-time civil defense staffs exist at each echelon of the Soviet administrative structure. Civil defense staffs also exist at significant industrial, utility and other installations. In wartime, the civil defense administrative structure, assimilated into an integrated command system, would play a significant role in maintenance of the government and the economy. This goal is supported by the protection provided leadership through deep, hard, urban sheltering and an extensive network of hardened relocation sites outside the cities, with redundant communications systems. The program also provides for continuity of support for the economy in wartime through the protection of the essential workforce by sheltering at work and by the dispersal of off-shift workers to areas away from worksites. Although much urban shelter space is available for the use of general urban populations, their protection is to be achieved primarily through mass evacuation of cities. In peacetime, more than 150,000 people work full-time in the civil defense program. In wartime, the numbers could swell to 16 million. The program costs the equivalent of $3 billion annually.

US Defense Forces: The United States deploys fewer than 120 ground and AWACS air defense radars, no SAMs for defense of North America and less than 300 interceptors (most 1950s vin-





tage). Moreover, the US has had no ballistic missile defense (BMD) capability since 1976, when the single SAFEGUARD site was closed. The US currently has almost no civil defense capability.

The US strategic modernization program addresses some of the major deficiencies in strategic defense, the most critical being lack of adequate air defense. Programmed initiatives to improve long-range surveillance include modern microwave radars for the DEW Line and over-the-horizon-back-scatter (OTH-B) radars looking east, west, and south. The US and Canada have developed a North American Air Defense Master Plan. At least six additional AWACS aircraft will be procured to augment current forces available for surveillance and command and control for the air defense of North America. In all, five squadrons of F-15 interceptors will replace the 1958-vintage F-106. The strategic modernization program also provides for the vigorous pursuit of research and development on BMD.

III THEATER FORCES





In 1981, *Soviet Military Power* described Soviet theater forces by category. *Soviet Military Power 1983* examines these forces as regionally deployed. For military purposes, the Soviets have divided Eurasia into three theaters: Western, Southern, and Far Eastern. Each theater has its own political and economic significance that determines Soviet military goals and objectives in the area and the strategy employed to achieve them.

The forces positioned for operations against NATO continue to be given the highest priority in receiving the newest and most capable systems. For example, since 1981 the Soviets have produced 4,500 tanks, including the T-80 deployed to forces opposite NATO. At the same time they have introduced new ground-attack aircraft and armored fighting vehicles into Afghanistan and are modernizing their forces in the Far East. This strengthening of forces is intended to enable the Soviets to achieve their political/military objectives as rapidly as possible with the most modern and capable theater forces, either through intimidation or direct military action.

A Renewed Concept for Combined Arms Combat: Capitalizing on their improved and modernized forces, the Soviets have reintroduced the World War II Mobile Group concept in the form of Operational Maneuver Groups (OMGs). OMGs are task-organized, self-sustaining, tank-heavy raiding forces constituting division- and corps-size formations at army and *front* levels, respectively. Organized for commitment from the outset, OMGs would be ex-

The new Su-25/FROGFOOT ground attack aircraft, armed with 30-mm gun, rockets, bombs and missiles, is deployed to forward bases in Afghanistan to provide close air support to the more than 105,000 Soviet troops engaged in intensive ground combat operations in Afghanistan.

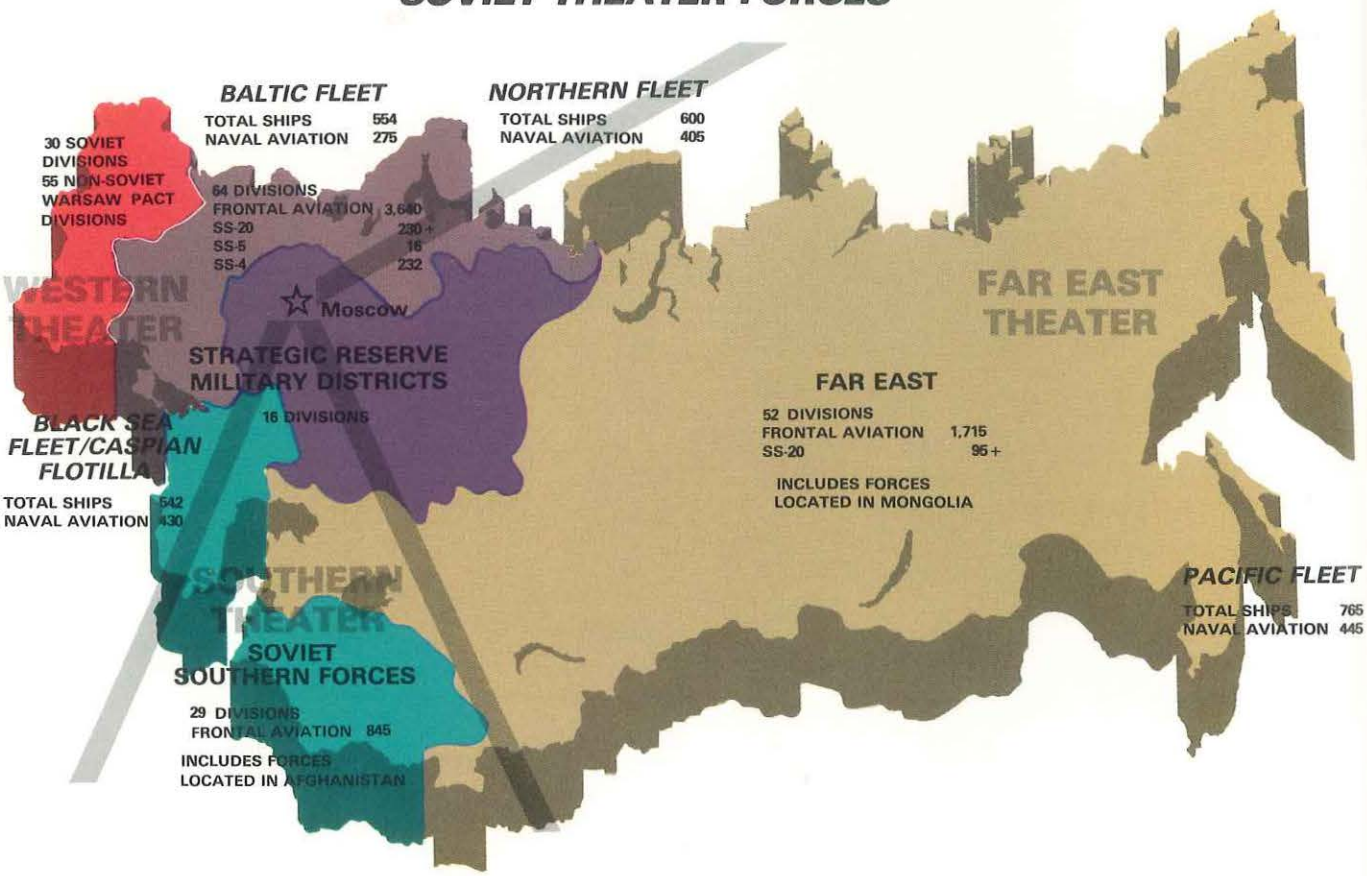
pected to penetrate the enemy rear areas quickly and independently of the main body of forces.

The Soviets believe that successful OMG operations could severely disrupt the NATO rear area, thereby increasing the likelihood of maintaining a rapid advance without early resort to nuclear warfare. Operationally, the OMG would facilitate commitment of reinforcements by securing terrain over which additional Soviet forces must pass while hindering NATO's efforts to reinforce its forces. Additionally, although the OMG concept has been developed for conventional offensive operations, it is also well-suited for exploitation of nuclear strikes.

SOVIET THEATERS

The Western Theater encompasses all of Europe. Because it contains those nations that possess a substantial portion of the world's wealth, technology, industrial capacity, and military power, it is the focal point of Soviet strategic planning. The Soviet goal in the Western Theater is to weaken the Atlantic Alliance to the point that it is no longer a viable military entity. In wartime, the primary Soviet objective would be to seize the initiative quickly and defeat NATO forces before they could be substantially mobilized or reinforced. To manage military operations against NATO, the Soviets subdivide the Western Theater into sev-

SOVIET THEATER FORCES



eral Theaters of Military Operations (TVDs)—continental, oceanic and intercontinental—in which designated forces operate to achieve specific military objectives derived from political goals.

The Southern Theater encompasses Southwest Asia, to include the Arabian Peninsula. In this theater, Syria, Iraq, Iran and Afghanistan are of particular importance because of their proximity to the Soviet border and their location near Persian Gulf oil reserves. Moscow's long-range aim in the region is to establish itself as the dominant power at the expense of the West. To further this aim, the Soviets' policy is to modernize and strengthen their military capabilities, promote dependence upon the USSR, expand ties with sympathetic pro-Soviet elements, orchestrate anti-Western propaganda and obtain access to strategic port and air facilities in the nations of the Indian Ocean basin.

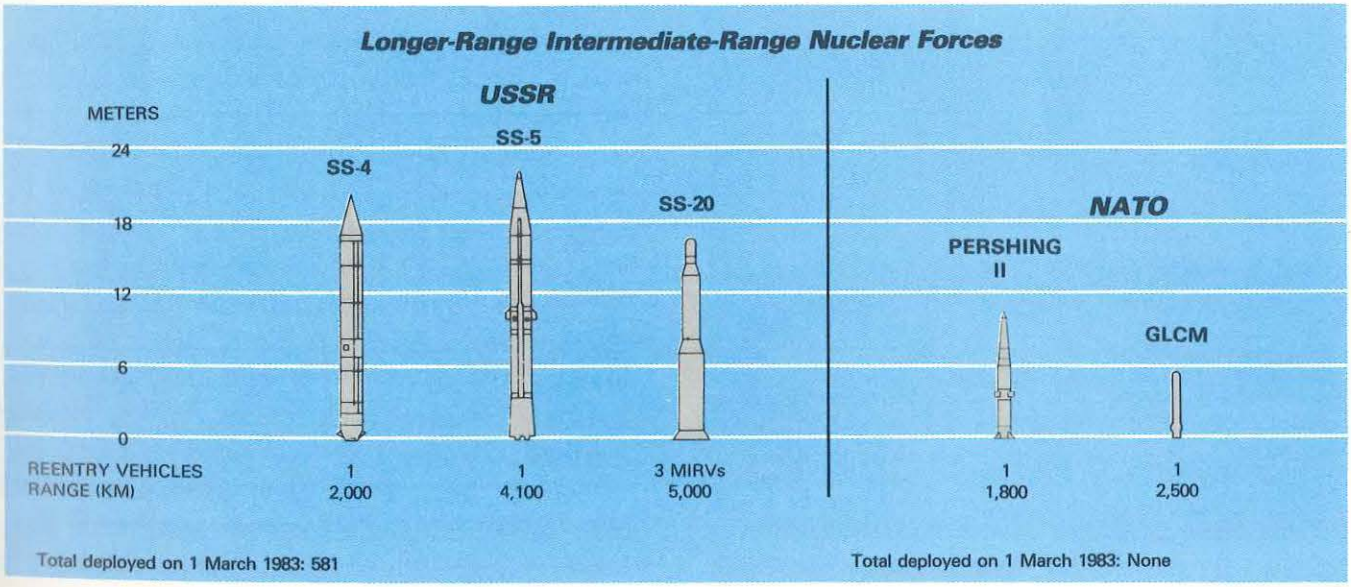
The Far Eastern Theater encompasses China, Japan, Korea and Southeast Asia. The Soviets' political goals are to improve relations with the PRC at the expense of US/PRC ties, to prevent Japan from increasing its contribution to Western security, to unify Korea under communist rule, and to expand Soviet influence in Southeast Asia. In the event of war, the Soviets would strive to control western and northeastern China, to preclude Japanese participation in a war in Asia and to defeat US and South Korean forces in Korea.

THE WESTERN THEATER

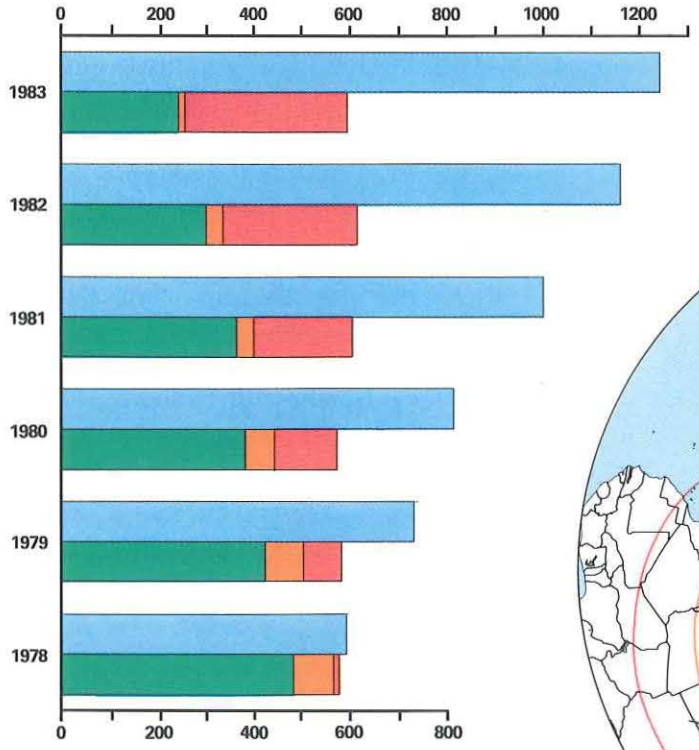
Soviet forces in the Western Theater are those that pose the most direct threat to NATO and encompass all forces located primarily in the Western USSR and Eastern Europe. Soviet forces from other areas of the USSR can, of course, be shifted to combat against NATO.

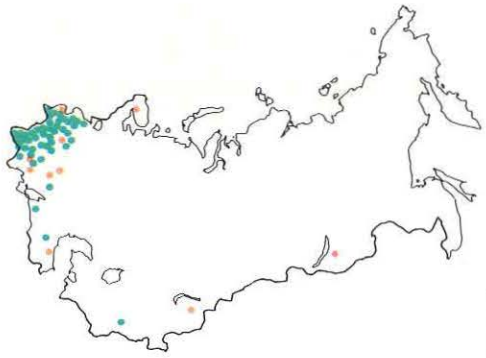
The following review of the Soviet force modernization program for the Western Theater will show that the Soviets are balancing their conventional and nuclear forces to be able to fight a range of conflicts.

Soviet Intermediate-Range Nuclear Force (INF) Missiles: The Soviets will employ these systems to achieve strategic objectives within the theater. Since late 1977, the nuclear striking



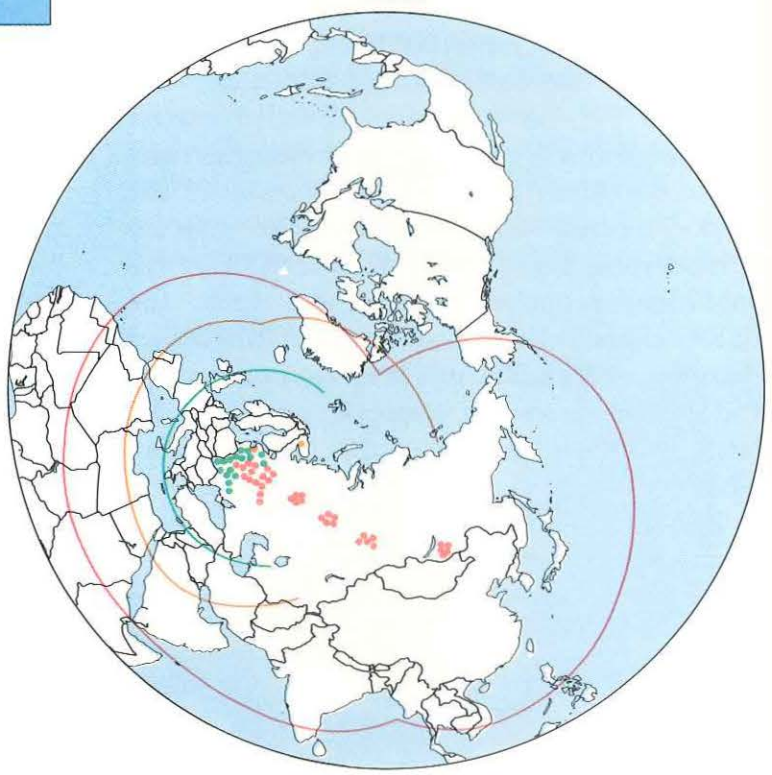
Longer-Range Intermediate-Range Nuclear Force Deployments

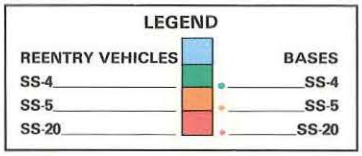




Deployment 1978

Deployment and Target Coverage 1983





power of the Soviet Long-Range INF missiles has more than doubled, even though the total number of launchers has decreased. This marked increase in force capability is due to deployment of the SS-20 missile with its three, multiple, independently targetable reentry vehicles (MIRVs).

Today's LRINF missiles, consisting of 248 older SS-4 and SS-5 launchers, and more than 330 mobile SS-20s, can deliver an initial salvo of

some 1,250 nuclear warheads. Of the total number of launchers, more than two-thirds are presently located within range of NATO, and nearly one-fourth of them have been deployed since 1981. The accuracy and reaction time of the SS-20 provide a marked improvement over the older systems. In addition, the mobility of the SS-20 greatly enhances survivability. Furthermore, each SS-20 unit is assessed to be equipped with refire missiles—one per launcher—and each refire missile also carries three warheads.

Ground Forces: The full impact of improvements to Soviet ground forces opposite NATO must be viewed in the context of the total ground forces available. Out of the total of over 190 active divisions in the Soviet force, 94 are located opposite the Central and Northern regions of NATO. Another twenty divisions are located in the Transcaucasus and North Caucasus Military Districts; these divisions could likely be committed against Turkey or Southwest Asia. Some 16 additional divisions that can be allocated to combat operations in Europe constitute the Strategic Reserve and are centrally located. The six Warsaw Pact Allies of the Soviet Union have a total of 55 active divisions. In 1982, the NATO Allies in their force comparison counted a total of 173 USSR/Warsaw Pact divisions which could be mobilized against NATO. Today, that number has risen.

Since 1978, the Soviets have made major quantitative and qualitative advances in their ground forces. While technological improvements to hardware continue unabated throughout the Soviet force, priority is given to the forces opposite NATO, enabling them to conduct rapid offensive operations, characterized by shock action, massive firepower and high mobility. These recent improvements in Western Theater ground forces are highlighted in the areas of surface-to-air, surface-to-surface missiles, tanks, artillery and helicopters.

Surface-to-Surface Missiles: Complementing the formidable array of intermediate and medium range systems, the Soviets are continuing to upgrade their tactical nuclear-capable surface-to-surface missile force.

- The SS-21 is replacing the FROG-7 in the Western Theater. The SS-21 has a



SS-21 Transporter-Erector-Launcher



SCUD B Tactical Nuclear Missile

range of about 120 kilometers, 50 kilometers greater than the FROG-7, and it is more accurate, thus enabling greater targeting flexibility and deeper strikes.

- The SCUD, normally deployed in brigades at army and *front* level, is being replaced by the SS-23; a tactical surface-to-surface missile with improved accuracy and a range of 500 kilometers, versus the SCUD's 300 kilometers.
- Soviet SS-12/SCALEBOARD missiles, with a range of about 900 kilometers, are expected to be replaced by the SS-22 of similar range but greater accuracy.

Tactical Air Defense: The Soviets have developed a massive, layered air defense for their ground forces to provide air superiority over the battlefield. They have integrated frontal aviation, radioelectronic combat, SAMs and associated radars and anti-aircraft artillery into an unparalleled tactical air defense system. Soviet tactical SAMs—SA-4, SA-6, SA-8, SA-9, SA-11, and SA-13—shown on page 31 are mobile and are a functional part of ground force units at several levels of command. The ZSU-23-4 supplements the SAMs and interceptors described below. These defenses will continue to be modernized in the future. Of particular note is the development of a new SAM with enhanced low-altitude capabilities and with the potential to defend against tactical ballistic missiles.

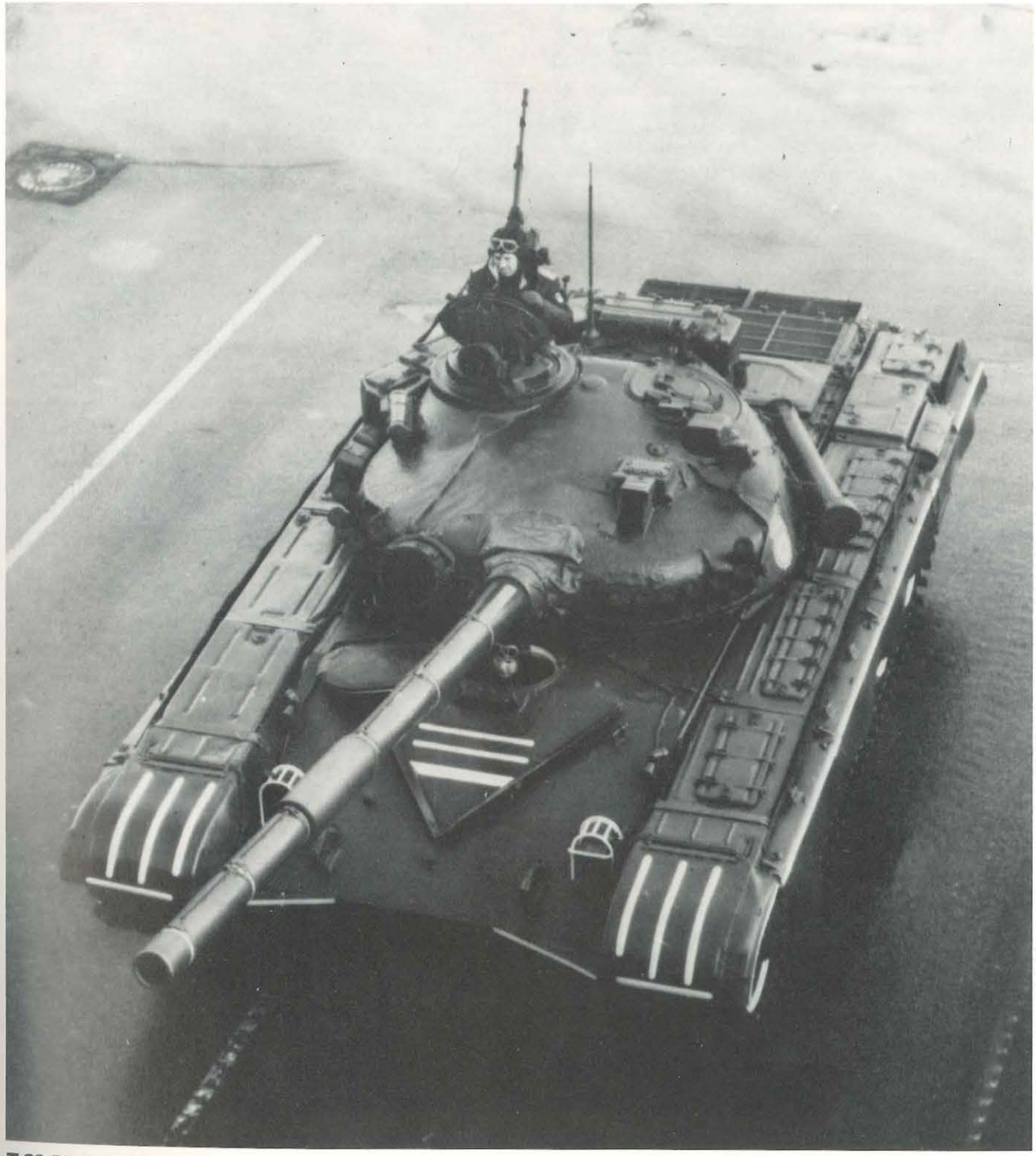
Tanks: The Soviet tank force has been undergoing a major upgrade since the mid-1960s when the first truly modern post-World War II tank, the T-64, was introduced. The first model of the T-64 was followed by at least one improved version, the T-64A, and several known variants of the T-72. The most modern Soviet tank, the T-80, featuring collective nuclear/biological/chemical protection, enhanced firepower and survivability, is in production, and at least several hundred have been deployed to the Soviet Groups of Forces in Eastern Europe. A dramatic shift in the proportion of these modern tanks, as part of the total Soviet inventory opposite NATO, has occurred. The impact on the most critical area—the one opposite the NATO center—is particularly significant. In this area T-64/72/80 tanks make up about 50 percent of the total, and continued deployment of the T-80 will increase the proportion of modern main battle tanks.



T-64A Main Battle Tank

Main Battle Tanks

	T-54/55	T-62	T-64	T-72	T-80
					
WEIGHT (TONS)	36	37	35	41	42
SPEED (KM/HR)	50	50	50	60	60
MAIN ARMAMENT	100-mm TANK GUN	115-mm SMOOTHBORE	125-mm SMOOTHBORE	125-mm SMOOTHBORE	125-mm SMOOTHBORE
MUZZLE VELOCITY (MPS)	1,400	1,600	1,750	1,750	1,750



T-80 Main Battle Tank

Artillery: The Soviets are pursuing a comprehensive program of upgrading and expanding the artillery fire support available to ground forces. Several new artillery pieces, some of which are nuclear capable, and one new multiple rocket launcher are being introduced. Simultaneously, an ongoing divisional reorganization has resulted in increases in the towed and self-propelled gun firepower of artillery assets. The addition of artillery battalions to tank regiments is intended to make tank and motorized rifle divisions fully capable combined arms forces. The multi-faceted reorganization has resulted in a 30 percent increase in the combined tube artillery, multiple rocket launcher and heavy mortar assets since 1978.

In addition to the increase in numbers, several developments illustrate Soviet emphasis on technologically improving the artillery force. Two new 152-mm guns, one self-propelled and one towed, have been fielded since 1978, and both are deployed with Soviet forces in Eastern Europe. They are nuclear capable and replace older pieces which were not nuclear capable.



152-mm Self-Propelled Guns



152-mm Self-Propelled Howitzer



122-mm Self-Propelled Howitzer

As an additional complement to surface-to-surface missiles, the Soviets are continuing deployment of nuclear-capable heavy artillery brigades armed with the mobile 240-mm self-propelled mortar and the 203-mm self-propelled gun. The recent deployment of the 203-mm gun outside the USSR, coupled with the appearance of the new 152-mm guns, indicates the importance Soviet doctrine places on the capability to deliver low-yield nuclear strikes relatively close to Soviet forces.

A new 220-mm multiple rocket launcher has been deployed opposite NATO since 1978. Each mobile launcher has 16 tubes and can fire chemical as well as conventional high explosive munitions.

The Soviets are also increasing the strength of their artillery units. For example, army level artillery regiments are being expanded to brigades—involving an increase of 30 to 80 percent of their previous strength.

Helicopters: While other Soviet weapon systems and assets have been upgraded substantially, the attack helicopter force has been approximately doubled in size and technologically upgraded. The total attack force opposite NATO has grown from 400 helicopters in 1978 to a current level of 800. Many of the attack



Mi-8/HIP E Attack Helicopter

helicopters are now divisional assets due to a general reorganization of air assets and the creation of Army Aviation.

The establishment of Army Aviation represents the most dramatic change regarding helicopters and further reflects Soviet emphasis on creating well balanced combined arms forces at many organizational levels. Inclusion of six Mi-24/HIND attack helicopters in divisional helicopter squadrons is a tangible manifestation of this combined arms capability, comparable to the previously mentioned establishment of artillery battalions in tank regiments.

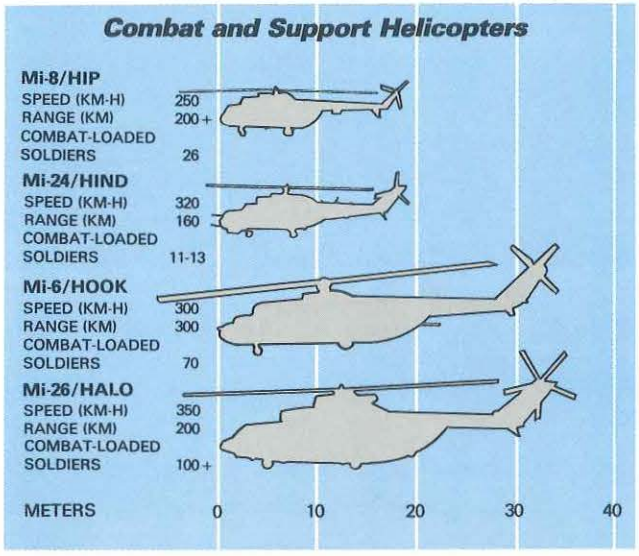
Most attack helicopters opposite NATO are the heavily armed Mi-24/HIND D/E and Mi-8/HIP E. All three aircraft are armed with 57-mm unguided rockets, which are effective against personnel and lightly armored targets, and anti-tank guided missiles (ATGMs). The ATGMs and rocket pods can be replaced with a mix of up to 750 kilograms of chemical or conventional bombs on each wing. Other armament on the HIND D/E is a multi-barrel



Mi-26/HALO A Heavy-Lift Helicopter

12.7-mm turreted nose gun; the HIP E has a single-barrel 12.7-mm gun.

Soviet emphasis on a heavy-lift helicopter transport capability is reflected in the development and recent appearance of the Mi-26/HALO. It is the world's largest helicopter, capable of carrying internally two airborne infantry combat vehicles or about 100 combat-loaded troops.

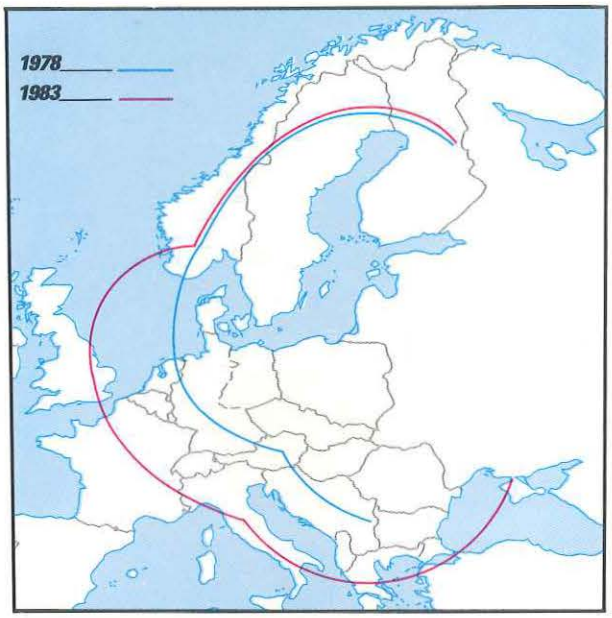


Frontal Aviation: Frontal Aviation has been the focus of comprehensive modernization and reorganization programs. The most impressive changes have occurred in the last five years, and are a result of the new Soviet emphasis on offensive capabilities. These changes, in the areas of equipment, training, tactics, and organization, have not occurred spontaneously, but are the result of careful, long-range planning to increase frontal aviation capabilities against NATO.

Since 1978, the Soviets have introduced two new fighters and three new versions of reconnaissance/ground attack aircraft. These aircraft have increased range, improved avionics, and better altitude and all-weather capabilities than previous Soviet models.

Soviet Ground Attack Aircraft (Capabilities Against NATO)

(NATO-Lo-Lo-High Profile)



- The FENCER A/C, FLOGGER J and FITTER H have had a particularly profound impact on Soviet offensive capabilities. The FENCER with its all-weather, low-altitude penetration capability manifestly increases Soviet ability to carry out deep strikes into NATO territory with little advance warning.
- The Su-25/FROGFOOT ground attack aircraft, currently in use in Afghanistan, may eventually be deployed in the Western Theater. Its role there would continue to be close air support to the ground forces.
- The MiG-29/FULCRUM and the Su-27/FLANKER fighters, currently being tested, are twin-engine jets with improved range, thrust-to-weight ratios and maneuverability. They represent a concerted effort by the Soviets to close the technology gap with the West.

Frontal Aviation Aircraft



	Su-24 FENCER A	MiG-23 FLOGGER B/G	MiG-27 FLOGGER D/J	Su-17 FITTER D/H	MiG-25 FOXBAT B/D	MiG-21 FISHBED L	Su-25 FROGFOOT
SPEED (KTS)	1,250	1,350	980	1,200	1,625	1,205	475
RADIUS (KM)	1,800	1,300	1,200	700	900	900	556
ARMAMENT	2,500 KG Bombs	6 AAMs	3,000 KG Bombs	3,000 KG Bombs	—	4 AAMs	4,000 KG
WINGSPAN (M)	10 (swept)	8 (swept)	8 (swept)	10 (swept)	13	7	15

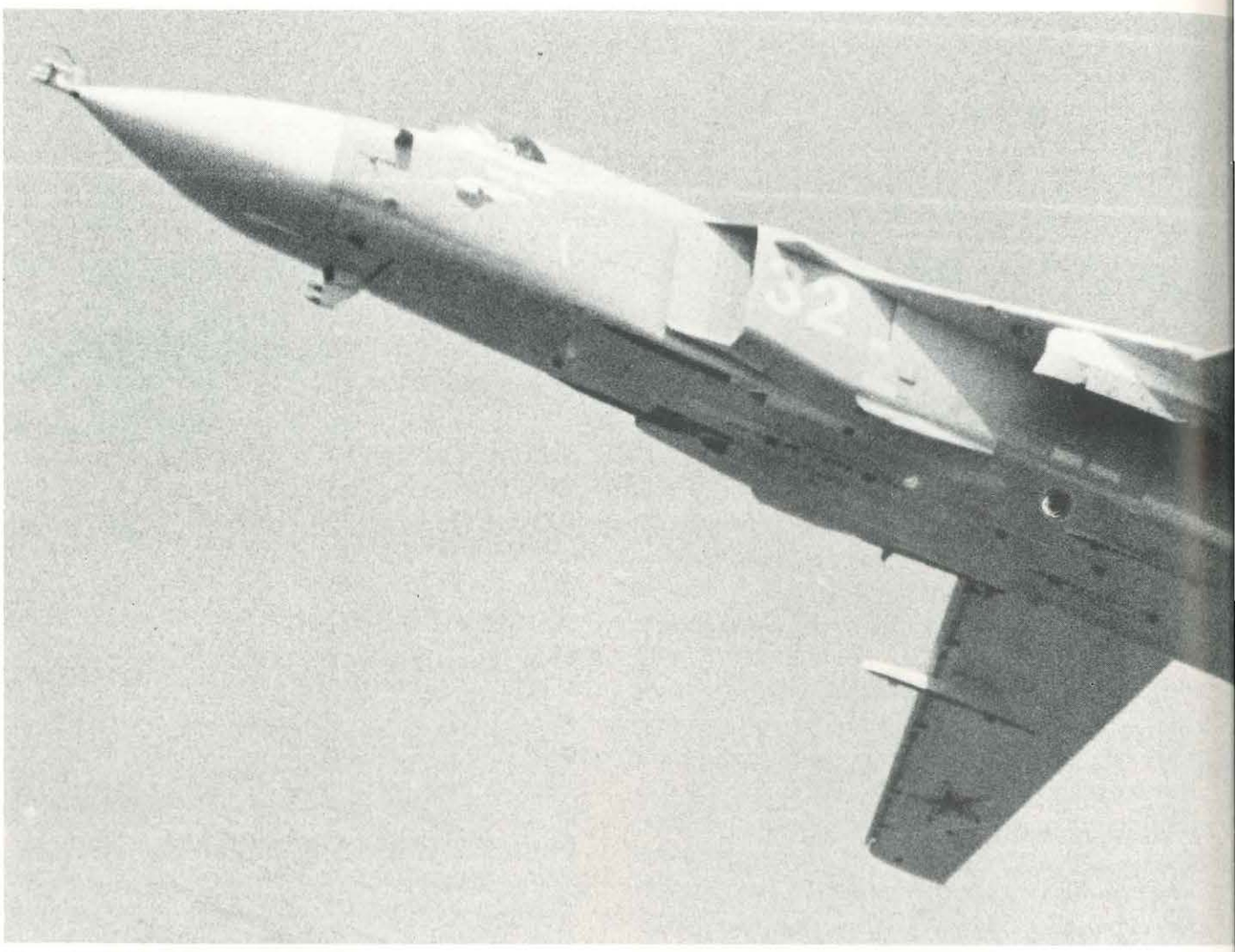
Changes have also occurred in tactics and training that are less visible than equipment upgrades, but have a potentially far greater effect on frontal aviation effectiveness. Soviet doctrine places great emphasis on achieving air superiority from the very outset. To implement doctrine, the Soviets have recently made significant changes in their air combat tactics and training programs. Pilot independence and initiative are now stressed. The continual technological upgrading of equipment and increasing proficiency in combat employment of that equipment have resulted in greatly increased Soviet aviation capabilities in the Western Theater, particularly the ability to strike into the NATO rear area.

Improvements in tactics and training are aimed toward maximizing performance of a new generation of Soviet aircraft that will have better penetration capabilities. Two new fighter aircraft, the FLANKER and the FULCRUM, are expected to become operational in the mid-1980s and will probably be widely deployed in the Western Theater by the late 1980s. These aircraft will be supersonic, all-weather counter-air fighters with look-down/shoot-down weapon systems and beyond-visual-range (BVR) air-to-air missiles. They may have a secondary ground attack role; in particular, the FULCRUM may have a true dual role capability similar to that of the US F-16 and F-18.

BACKFIRE Bomber: Used in a theater role, the BACKFIRE has a greater combat range and payload capability than the Soviet BADGER and BLINDER medium bombers. It also has better capability to penetrate modern air defenses in that it can fly at high subsonic speeds at low altitude. The BACKFIRE's capabilities will continually improve during its expected in-service life.

Reorganization of Air Forces: A recent major reorganization of the command structure for Soviet air and air defense forces will significantly improve Soviet air warfare capabilities. The new structure provides the Soviets with a peacetime organization that closely approximates their anticipated wartime structure for the employment of air power. This will allow a more rapid transition to a wartime posture and will enhance operational flexibility and coordination through centralized control of air assets at *front* and theater levels.

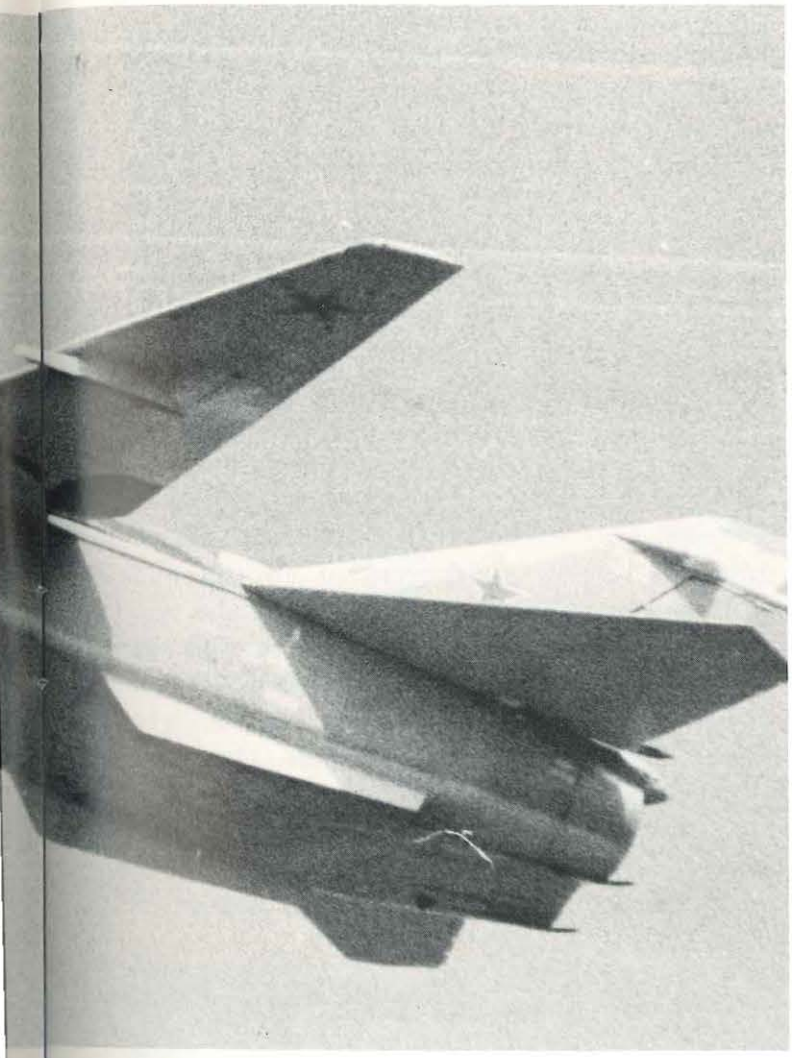
Soviet Navy: The Soviet Navy surface ships, submarines and aircraft arrayed against NATO are in the Northern Fleet, the Baltic Fleet and



Su-24/FENCER Fighter/Bomber

the Black Sea Fleet. Improvements in these forces during the course of the past five years have encompassed all aspects of naval warfare and have involved numerous individual weapon systems. The principal missions of Soviet surface combatants, attack submarines and Soviet naval aviation include the protection of the seaborne approaches to the Soviet Union and Warsaw Pact Allies and the isolation of NATO forces from reinforcement and resupply.

In addition to submarines and major surface combatants, Soviet construction programs have produced minor combatants well suited to theater level combat operations. Since 1978, units of four new classes of ocean and coastal patrol craft have entered service, including guided-missile patrol combatants, missile-equipped hydrofoil patrol craft, torpedo-equipped patrol hydrofoils and antisubmarine warfare patrol combatants. In addition to providing modern platforms with significant offensive firepower to supplant or replace obsolescent



units, all of these minor combatants demonstrate improved air defense capabilities.

A major responsibility of the Soviet Navy is support to Warsaw Pact ground forces to include defense of their maritime flanks and the conduct of amphibious warfare operations.

Soviet Naval Infantry units assigned to the Northern, Baltic, and Black Sea Fleets have undergone a major reorganization, resulting in an increase in organic firepower. These units have received self-propelled howitzers and additional multiple rocket launchers, antitank weapons and medium tanks.

Chemical Warfare: Soviet ground forces are the world's best equipped for the employment of chemical munitions. The forces are also capable of operating effectively in toxic environments.

Soviet doctrine calls for the use of toxic chemical warfare agents in both offensive and defensive situations. They are to be used in close coordination with high explosive and nuclear strikes.

This reflects the Soviet assessment that chemical operations have a distinct advantage over nuclear weapons in limiting structural damage. Soviet doctrine indicates that nonpersistent chemical agents would be used prior to front-line combat engagements. Persistent CW agents would be used in the deep rear and along troop flanks to protect advancing echelons.

There are over 80,000 chemical defense personnel in the Soviet Ground Forces. This number would significantly increase during periods of war. In addition, the navy and the air forces have personnel who perform chemical defense duties.

Radioelectronic Combat: In Soviet doctrine, radioelectronic combat (REC), is designed to systematically disrupt vital NATO command and control at critical times during a battle. The Soviets plan to accomplish this disruption of control through the integrated use of physical destruction, electronic jamming, and deception, while concurrently providing protection of their own command, control and communications (C^3) systems.

To implement their REC doctrine, the Soviets have developed an impressive capability and continue to field new systems for intelligence collection, and electronic countermeasures, as well as physical destruction of enemy assets.

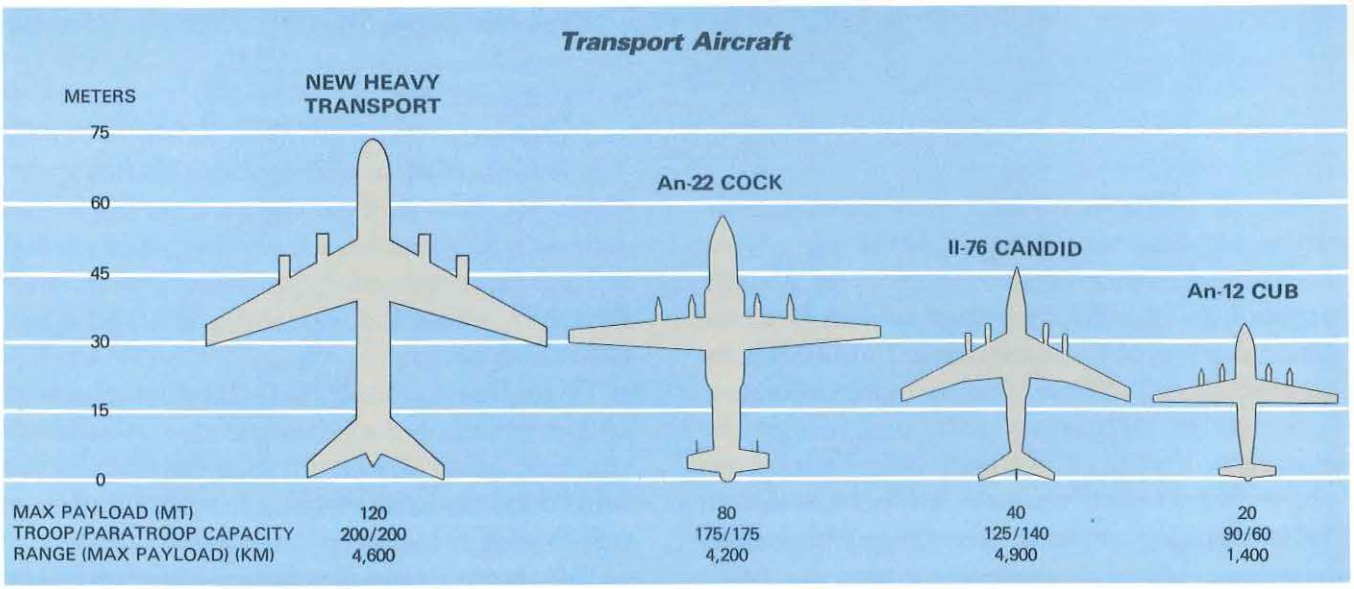
Transport Aviation: Soviet Military Trans-

port Aviation (VTA) is responsible for providing airlift for Soviet airborne forces and air assault brigades as well as the air logistics system for the armed forces as a whole. VTA continues to modernize its air transport inventory. The number of An-22/COCK long-range heavy lift turboprop transports has remained constant in recent years. The medium-range An-12/CUB turboprop transport is being replaced by the Il-76/CANDID long-range jet transport at the rate of about 30 aircraft per year. The CANDID can carry twice the CUB's maximum payload about three and one-half times as far. While the overall VTA inventory has declined by about 60 transports in the last five years, its carrying capacity, measured in ton-kilometers, has risen almost 50 percent.

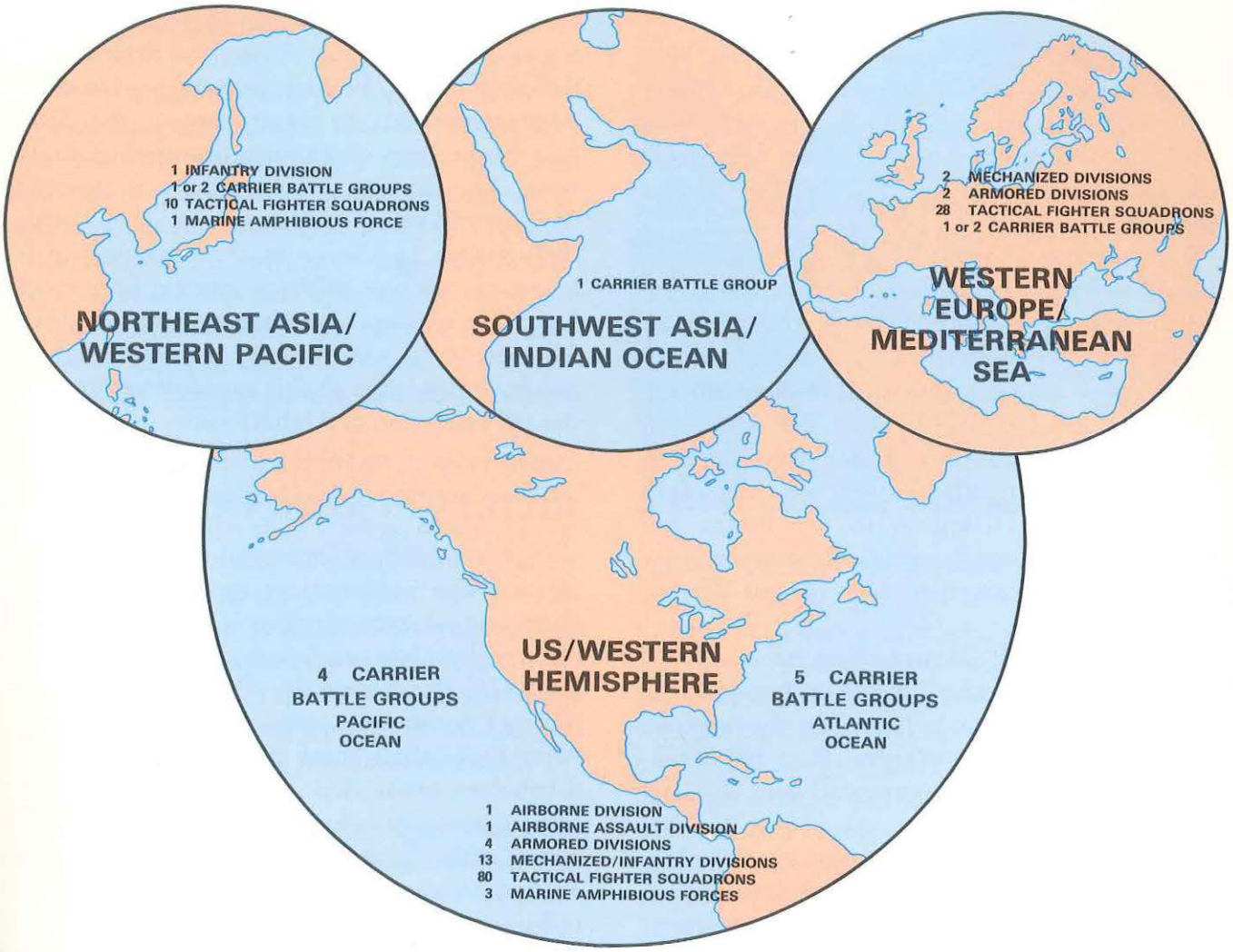
The Soviets are also developing a new long-range heavy-lift transport comparable to the US C-5A, which should enter service in the mid-to-late 1980s. When available in significant numbers, it will enhance VTA's capability to carry outsized, very heavy loads. It will increase the airlift potential in support of power-projection goals and provide greater wartime capacity to lift airborne combat divisions in time of war.

US and Allied Force Improvements: US and NATO allied forces have also been strengthened in recent years, but at a less rapid and impressive rate than the Warsaw Pact's. For the 1980s, the goal is to accelerate NATO's rapid reinforcement capabilities, to modernize US and allied forces significantly, and to achieve greater readiness and sustainability. NATO's longer-range intermediate range nuclear forces also are to be upgraded in the near future.

US ground and tactical air forces, in particular, are programmed for major modernization over the next few years. An accelerated procurement effort will introduce larger numbers of new tanks, combat aircraft and other systems. The Army is receiving the new M-1 tank and Bradley fighting vehicles and will be receiving the Multiple Launch Rocket System, improved anti-tank weapons, modern helicopters and air defense weapons. The result will be US forces that are more combat effective, more ready and better configured for their NATO missions. For example, the M60A3 tank, first introduced into Western Europe in



US Forces for Theater Warfare



1979, constitutes about 30 percent of the 5,000 US tanks now in Europe. Although, it features many technological improvements over earlier M60s, it still lacks laminated armor and is equipped with the NATO standard 105-mm gun. The M-1 tank has many technological improvements, including improved armor and fire control; eventually it will mount the 120-mm smoothbore gun.

US tactical air forces retain a qualitative advantage over those of the Soviet Union both in aircraft and weapons and—more important—in personnel and training. The US F-14, F-15, F-16, and F-18 today are among the best air superiority aircraft in the world. They began entering service during the later 1970s, and new variants of the F-15 now are deployed as well. The F-15C/D first joined US Air Forces Europe (USAFE) in 1981; the F-16A/B also joined in 1981.

The US tactical air forces' ordnance today is believed to be better than that available to the

Pact. The AIM-9L Sidewinder has been demonstrated recently to be a highly lethal close-in weapon.

Completion of the rapid reinforcement program, including all division sets of prepositioned equipment, strategic airlift programs, and the Host Nation Support agreements will enable US forces to deploy quickly to Europe and elsewhere.

Improvements in allied forces are significant. In general, allied ground forces will be receiving more modern tanks, artillery, and anti-tank systems. The European NATO F-16 fighter program is well along, with a total of over 300 aircraft planned. Other NATO nations are beginning to introduce into service the Tornado strike fighter, an adverse-weather, day/night attack aircraft analogous to the Soviet Su-24/FENCER. There are procurement plans for some 800 Tornados, including 165 air defense variants.

These combined US and allied measures will significantly strengthen NATO's forward defense capabilities, and help reverse the negative trends in the NATO-Warsaw Pact force balance that have been experienced over the past decade.

US European intermediate-range nuclear forces are scheduled to be upgraded starting in late 1983. NATO has endorsed the deployment of 108 US Pershing II ballistic missile launchers to the Federal Republic of Germany and 464 US Ground Launched Cruise Missiles (GLCM) to five European countries unless a satisfactory INF Agreement is achieved. Both systems will have improved accuracy, and the GLCMs, in particular, are suitable for attacking some fixed targets now covered by aircraft.

THE SOUTHERN THEATER

While the modernization of the Soviet forces opposite NATO receives priority attention, forces for operations in the Arabian Sea/Persian Gulf have also been upgraded, in particular, in air power. Soviet developments in this area reflect, in part, Soviet involvement in Afghanistan but in greater part, the Soviet long-range aim of gaining dominance in the area. The Soviets will no doubt continue to develop and refine military plans for operations in this area in the event the opportunity for direct or indirect military intervention should arise. There is no better example of the Soviet willingness to use military force to achieve political objectives in this unstable region than the 1979 invasion of Afghanistan.

SOVIETS IN AFGHANISTAN

In April 1978, a successful communist coup toppled the independent government of Afghanistan. A second coup in September 1979 resulted in a less pro-Soviet regime. In December 1979, the Soviets invaded and installed a puppet communist regime in Afghanistan. After more than three years, the Soviets find themselves embroiled in a counterinsurgency campaign that cannot be won with current force levels. Moscow is unable to control the Afghan countryside or to install a regime whose influence extends more than a few miles from major population centers. However, current Soviet levels of commitment and combat losses are probably acceptable to Moscow. The Soviets control the major cities and are working to win through the attrition of the Afghan Freedom Fighters, the *Mujahideen,* and by indoctrinating a new generation of Afghans to accept life under a communist regime.

The Soviet invasion army was equipped and trained to wage war on the North German or Manchurian plains, and adaptation to combat against the Freedom Fighters and terrain has

been difficult. The Soviet 40th Army in Afghanistan currently has more than 105,000 troops—an increase of about 25,000-30,000 since the 1979 invasion. The increase is due primarily to augmentation by separate security units, including Ministry of Interior (MVD) and State Security (KGB) troops, which assumed protection and security missions, thus releasing combat units from those functions. Through trial and error, the 40th Army has evolved into a force that is often task-organized, supported by artillery and air assets, the latter in the form of ground support aircraft, including the new FROGFOOT and the already proven HIND attack helicopter.

The *Mujahideen* are short of money, weapons, and military sophistication but not courage and zeal. They draw their strength from a long history of independent thinking and a fierce resistance to invasion, all tied within the framework of Islam. The *Mujahideen* are armed with a variety of weapons that range from turn-of-the-century rifles to the most modern assault weapons captured from the Soviet or Afghan armies or brought into *Mujahideen* camps by deserters and defectors.

The Soviet-controlled Afghan army is more a liability than an asset. Dwindling through defection and desertion, the effective combat forces of the Afghan army now number about 30,000, down from the pre-invasion level of over 100,000. Forced induction of Afghan males ranging from early teens to middle age has failed to fill the Afghan army ranks and has further alienated an already hostile population. Poorly trained and equipped and with little stomach for fighting their own countrymen, the Afghan army still contributes some forces to combined Soviet/Afghan operations against the insurgents.

New or modified equipment has been introduced to Afghanistan. The subsonic close air



Mi-24/HIND E Ground Attack Helicopter

support FROGFOOT aircraft, roughly similar to the US A-10, provides timely and accurate support with bombs, rockets, napalm and cannon fire. The AGS-17 automatic grenade launcher and the 82-mm automatic mortar provide the high trajectory firepower suited for the terrain. Although the Soviets continue to use an older generation of tanks, the latest models of wheeled and tracked armored personnel carriers and self-propelled artillery have found service in Afghanistan.

In violation of international law and basic human rights, the Soviets have made use of lethal chemical agents to destroy *Mujahideen* who have taken refuge in ravines and caves, and to deny access to or through key terrain. Other chemicals are also used that destroy crops, kill domestic animals and poison water sources.

In 1982, the Soviets resorted to scorched-earth tactics, intended to deny the *Mujahideen* sources of sustenance. Soviet aircraft conducted airstrikes against villages, often reducing entire settlements to rubble. In these operations, ground forces rapidly move in and systematical-

ly destroy crops and irrigation systems. Water sources are contaminated, flocks decimated, and people killed or forced to flee to the hills. These ruthless tactics have accelerated the exodus of the brave Afghan populace to Pakistan.

The Soviets continue to improve and expand their logistic infrastructure in Afghanistan, thus providing further evidence that they intend to remain for a long time. Airfields are being expanded and supplies stockpiled. Rail lines and POL storage sites at transshipment points near the Soviet-Afghan border are being expanded. Permanent bridging spans the border river. With an improved and more efficient sustainability base, the Soviets could increase the number of combatants that are now currently employed, or use Afghanistan as a staging area for intervention in other Southwest Asian nations.

Three years of fighting has had its effect upon the Soviet soldier involved in combat. In Afghanistan he is usually a young conscript who is ill-prepared to cope with the frustration of the counterinsurgency war. He is told by his superiors that he will be fighting against Chinese and Americans backing the Afghan counterrevolution. When confronted with reality, the soldier loses enthusiasm and morale. Corruption in the ranks accounts for some loss of Soviet war materiel. Accounts from Afghanistan tell of troops selling arms, equipment, and gasoline for alcohol, drugs, and occasionally, Western consumer goods. Poor morale also is evident on the battlefield where the soldiers hesitate to leave the relative safety of armored personnel carriers to close with a highly skilled and motivated foe; where the night belongs to the Freedom Fighters; and where emphasis is placed upon the indiscriminate use of firepower instead of sound infantry and combined arms tactics.

Despite this, Afghanistan provides a live-fire test bed for Soviet weapons, equipment and doctrine. It further provides the Soviet Army with a pool of battle-tested officers, non-commissioned officers and soldiers. The Soviets will continue to maintain their presence in Afghanistan to keep the Afghan regime under Soviet control. They will use Afghanistan to extend their own zone of security, as a potential staging area for power projection to South and Southwest Asia and to intimidate the regional states. By Soviet standards the war in Afghanistan is relatively cheap—in money, men and equipment. Since December 1979, only 5,000 Soviets have been killed and some 10,000 wounded, but the number of Afghan dead and wounded is far greater.

Other than Afghanistan, Soviet forces for operations in the Southern Theater of war are deployed in the southern Military Districts of the USSR. Twenty-nine divisions, more than 800 tactical aircraft, and some 400 helicopters are available to strike Iran, Pakistan, or Iraq and could continue southward into other Gulf states. Such an effort would be supported by the Caspian Sea Flotilla, the Soviet Indian Ocean Squadron, and a full range of air capabilities including heavy-lift air transport.

Although most of the divisions in the North Caucasus, Transcaucasus, and Turkestan Military Districts (excluding forces in Afghanistan) are at relatively low readiness levels, adequate forces could be generated for offensive operations in several weeks. Units are receiving more modern tanks, armored personnel carriers and other replacements for outdated equipment.

More significant improvements have been made in Soviet air power in the region. Several air defense regiments equipped with older aircraft have been replaced by ground-attack regiments and airfields have been modified accordingly. The deep-strike interdiction FENCER is also deployed in the southern USSR and could attack targets in Iran, Pakistan, and

the Gulf oil-producing states. The range of other tactical aircraft can also be extended by using airfields in Afghanistan.

US Forces: The US Navy maintains a continuous presence in the Northwest Indian Ocean of at least one Carrier Battle Group in addition to minor forces in the Persian Gulf. While there are no US combat land forces in the area, there are periodic deployments of US Marine combat elements to the region. Progress has been made in the last few years to enhance capabilities to respond to the requests of nations in the region faced with direct or indirect aggression. A US-based major headquarters has been established and dedicated to contingency planning for the area. Additionally, prepositioning of supplies and equipment, both ashore and afloat, continues on an accelerated basis, and negotiations for arrangements for access and use of bases and facilities are in train.

FORCES IN THE FAR EAST

In the Far East, as elsewhere, the Soviet leadership views its growing military power as a key means of accomplishing political and economic as well as military objectives. At present, Soviet military forces in the Far East are second only to those forces opposite NATO in size, modernization and capability.

Soviet forces in the Far East have been substantially expanded and improved since 1965 and are now capable of large-scale offensive as well as defensive operations. During the 15 years between 1965 and 1980, for example, the number of Soviet divisions opposite China more than doubled, while the number of tactical, fixed-wing aircraft more than tripled. The Soviet buildup in the Far East was largely the result of the Sino-Soviet rift in the 1960s and continuing bad relations to this day. Moscow was not pleased by the reestablishment of diplomatic relations between China and the US. Further, Moscow fears the establishment of a US-China or US-China-Japan security association. In this regard, the Sino-Japanese Treaty of Peace and Friendship signed in August 1978 heightened Soviet concern over possible Beijing-Tokyo collusion against Soviet interests in the Far East. Finally, the Soviets see China's search for advanced military technology as an unsettling development.

The Soviets' reaction to these developments has been consistent with their belief that any enemy, or potential combination of enemies, can be intimidated, without a shot being fired, if the Soviets are perceived to have military superiority. Thus, the USSR has demonstrated a growing inclination to rely on its military power in the region to achieve political goals.

The Soviet Union now bases close to 40 percent of its SSBNs in the Pacific and has built up considerable naval and air forces to protect them. Soviet actions in the Kurils and adjacent areas are also related to their concerns for the security of the Pacific SSBN force.

The Soviet buildup of forces on Japan's Northern Territories—four islands off the northeastern coast of the Japanese island of Hokkaido—is a vivid demonstration of Moscow's use of military power for political coercion. The islands close to the Soviet Kurils are Japanese but have been occupied by the Soviets since the end of World War II. In 1978, the Soviets began deploying troops to the islands and constructing military support facilities. Moscow continued that military buildup during 1979 and currently has about 10,000 troops on the islands, including a coastal defense division. These forces serve as a very visible reminder to Japan of Moscow's intention to support its claim to the islands with military force. Moreover, these islands have strategic value for the Soviets. They form a gateway between the Sea of Okhotsk and the Pacific Ocean. In addition to an ac-

cess to the Pacific, they form a defensive barrier protecting the Eastern USSR and a vital link for securing Pacific Fleet operations.

The following is a synopsis of Soviet force modernization in the Far East and the threat these forces pose to Asian and US interests.

LRINF Missiles: Soviet Strategic Rocket Forces pose a major potential threat to the Pacific Region. Over the past decade, a number of missile systems have been deployed that have the capability to reach targets in much of Asia. Starting in 1977, the mobile SS-20 was deployed to the Far East and is the only operational LRINF missile in this region. With its three warheads and increased survivability, this system represents an important qualitative improvement in Soviet missile forces. Of the more than 330 SS-20 launchers in the Soviet inventory about one-third are deployed in the Far East.

Ground Forces: The Far Eastern Theater encompasses forces in the four Military Districts bordering China—Central Asia, Siberia, Transbaikal, and the Far East—plus Soviet forces in Mongolia. These forces are primarily oriented toward operations against China. More than 50 active divisions are garrisoned in this region, compared to 20 divisions in 1965. Most of the dramatic growth in this force occurred during the late 1960s and early 1970s. Since then, Moscow has emphasized qualitative improvement while continuing gradually to increase the size of the force.

The T-72, one of the most modern Soviet tanks, was introduced into the Far East in 1982. Most of the armored personnel carriers in the region are modern versions. Some divisions in this area now have modern surface-to-air missile regiments in lieu of antiaircraft artillery. Divisional towed artillery pieces are also being replaced with more mobile and capable self-propelled weapons. A significant portion of the inventory of 130-mm field guns has been replaced by nuclear-capable 152-mm guns which constitute an important upgrading of conventional and nuclear delivery systems in this region. Attack helicopter regiments were deployed to the Far East in the mid-1970s to provide fire support to ground maneuver formations.



T-72 Main Battle Tank: Nuclear/Biological/ Chemical Warfare Training Exercise

Air Forces: Since the late 1960s, the Soviets have also carried out an impressive buildup and modernization program in their air forces in the Far East. The tactical aviation fixed-wing force has dramatically increased from less than 300 aircraft in 1966 to about 1,200 today. There are also over 500 interceptors, bringing the total Frontal Aviation in the Far Eastern Theater to more than 1,700 aircraft. Although the growth





pattern of the past 15 years is not anticipated, force modernization with newer aircraft such as FLOGGER and FENCER will continue. Significantly, over 90 percent of tactical aircraft is third-generation, compared to about 50 percent in 1978. The size of the bomber force has remained relatively stable, but there have been significant qualitative improvements. There are now about 40 BACKFIRE bombers with the Soviet Air Force in the region. Combined with older BADGERs and other aircraft, the BACKFIREs pose a substantial threat to targets in China, Japan, Korea and the Philippines.

Naval Forces: The Pacific Ocean Fleet, the largest of the Soviet Navy's four fleets, has grown steadily since the mid-1960s from about 50 principal surface combatants to over 80 today. The 1979 assignment of the KIEV-Class aircraft carrier MINSK to the Pacific Fleet highlights the qualitative aspects of the improvements that have taken place. The MINSK is equipped with FORGER VTOL attack aircraft and HORMONE antisubmarine warfare (ASW) helicopters. A second carrier of this class will likely join the Pacific Fleet during this decade. Three KARA-Class guided missile ASW cruisers have also joined the fleet since 1978.

Equally impressive have been the improvements in the Soviet submarine force in the Pacific, which numbers over 30 ballistic missile submarines, and over 90 attack submarines—including substantial numbers of modern VICTOR III nuclear-powered attack submarines (SSN), CHARLIE I nuclear-powered cruise missile submarines (SSGN), and the new diesel-electric powered KILO conventional attack submarine. These submarines give the Pacific Fleet a substantially improved capability in antisubmarine and anti-carrier warfare.

MiG-23/FLOGGER G All-Weather Counterair Fighter



FORGER VTOL Attack Aircraft aboard Carrier MINSK.

Soviet Naval Aviation has grown by over 50 percent since the mid-1960s to a current force of about 400 aircraft. The deployment of over 30 naval long-range BACKFIRE B aircraft to the Far East since 1980—in addition to the Air Force BACKFIREs in the region—has significantly increased the threat to shipping in large expanses of the Pacific.

The Pacific Fleet also includes the largest contingent of naval infantry in the Soviet Navy—an 8,000 man division based near Vladivostok. Elements of this elite, well-trained force deploy with naval forces in the Pacific and, on a limited scale, can rapidly respond to local contingencies.

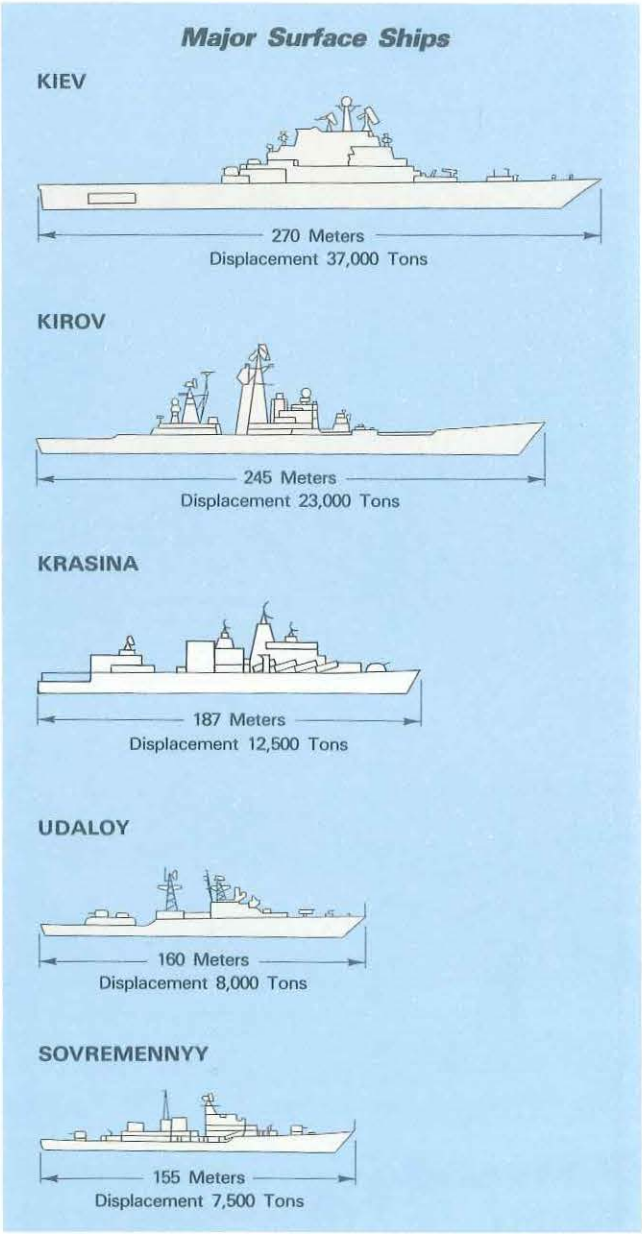
The quality and quantity of Soviet forces in the Far East have been substantially improved, and these trends will continue in the future. The Soviets have a formidable capability to wage wars simultaneously in the West and East. Moreover, the Soviets have projected their military power in the Far East beyond their historic sphere of influence and have thereby enhanced their capability to challenge any nation or combination of nations in this region.

US and Allied forces capable of countering Soviet adventurism in the Far East are those forces depicted on page 56.

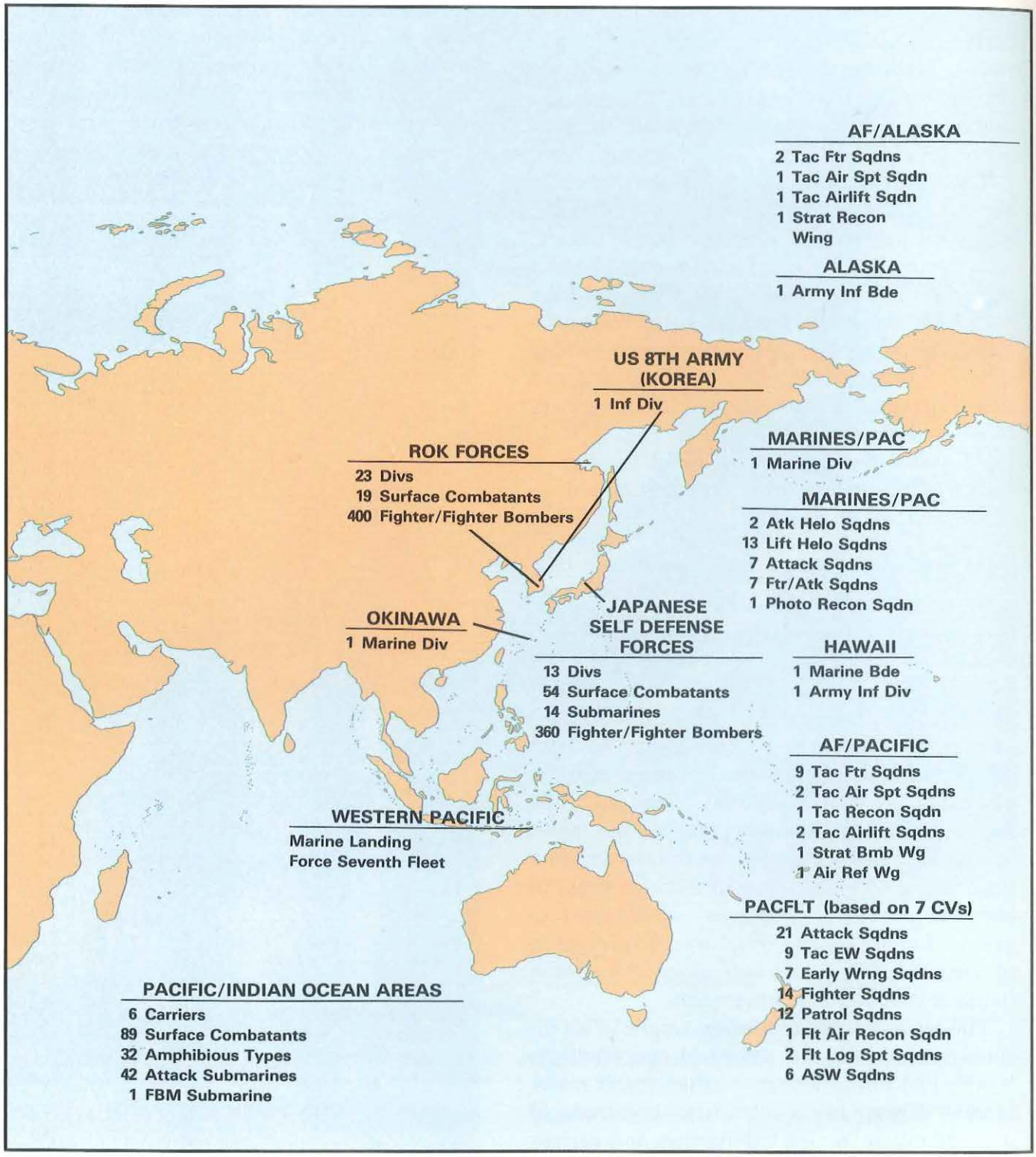
GENERAL NAVAL FORCES

The missions of the Soviet Navy are two-fold: first, to protect the seaward approaches to Warsaw Pact territory and coastal waters including SSBN patrol areas and, second, to neutralize Allied maritime forces which could threaten the success of Soviet military operations. Each of these two major missions requires distinct groups of ships and aircraft. Generally, the forces protecting the sea approaches are larger in number, smaller in size, more oriented to a single task and less capable in terms of weapons and endurance. These forces are designed to gain and maintain control of waters contiguous to Warsaw Pact states and along the coastal flanks of ground force movements.

The second wartime mission results in an increasing trend toward sustained operations by large naval formations in all the world's major oceans. These forces comprise hundreds of strike bombers, attack submarines and surface warships. They are forces capable of firing eight types of medium and long-range nuclear-capable antiship cruise missiles and four types of missile-delivered long-range ASW weapons. These modern forces have been created as a result of improved design efforts and Soviet advances in nuclear and other technologies. Concurrently, the Soviets have constantly ex-



US and Selected non-US Forces in the Far East Theater

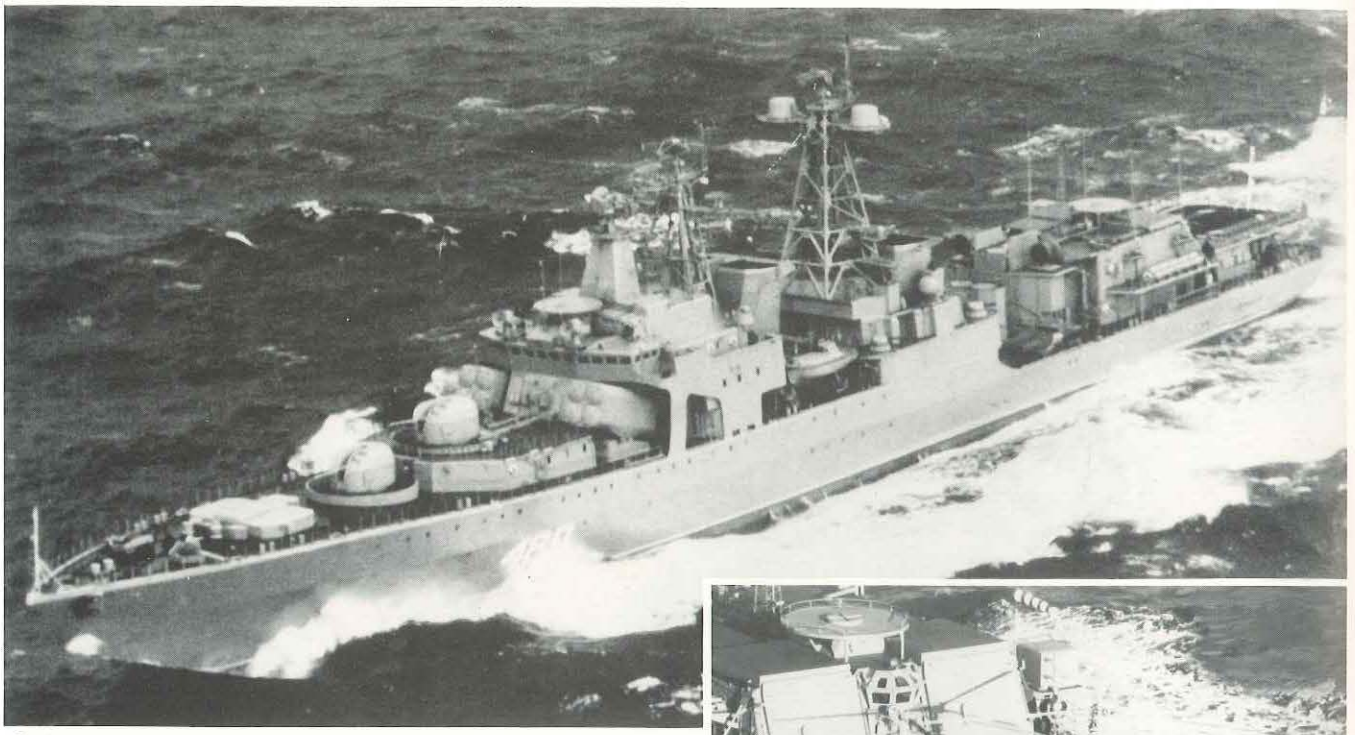




Nuclear-Powered Guided Missile Cruiser KIROV

panded their distant area operations to maintain a significant naval presence in the Mediterranean Sea, Indian Ocean, South China Sea and in the South Atlantic.

During the past several years, the Soviets have maintained a large naval construction program. This vigorous program now comprises seven classes of surface warships, five classes of submarines and four aircraft types. Among the surface warship programs is the KIEV-Class



Guided Missile Destroyer UDALOY

37,000-ton V/STOL aircraft carrier. In 1982, the third KIEV unit joined the fleet with the fourth unit expected to do so in 1984.

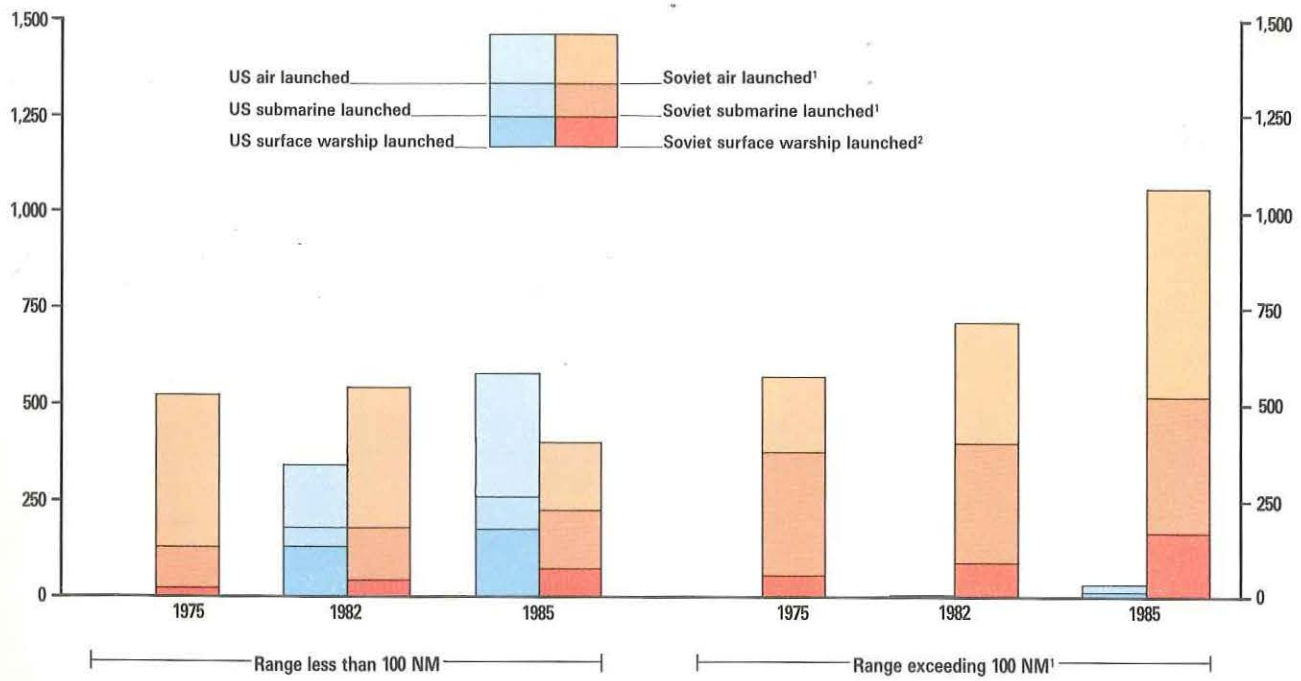
The second unit of the 23,000-ton KIROV-Class cruiser—the first Soviet nuclear-powered surface warship—is nearing completion. This unit will have a significantly improved surface-to-air missile defense capability, and it is being fitted with a new SAM believed to be optimized to defend against sea-skimming cruise missiles. The first ship of the 13,000-ton gas-turbine-powered guided missile cruiser of the KRASINA-Class has also entered service. This ship carries 16 antiship cruise missiles and an advanced vertical launch SAM system of the same type as that on the KIROV-Class. Additional units of two classes of guided missile destroyers, the SOVREMENNYY (antisurface warfare) and the UDALOY (antisubmarine warfare), continue to augment the fleet.



Ka-27/HELIX Anti-Submarine Warfare Helicopter on UDALOY

Of the three nuclear and two diesel classes of attack submarines being produced, the most impressive is the 12-14,000-ton OSCAR-Class carrying 24 SS-N-19 antiship cruise missiles with a range of 500 kilometers. This is more than three times as many cruise missiles than have been fitted on previous classes of series-produced Soviet submarines. Additionally the nuclear-powered, titanium-hulled ALFA-Class torpedo attack submarines—at 40 knots the

Anti-Ship Cruise Missile Launchers

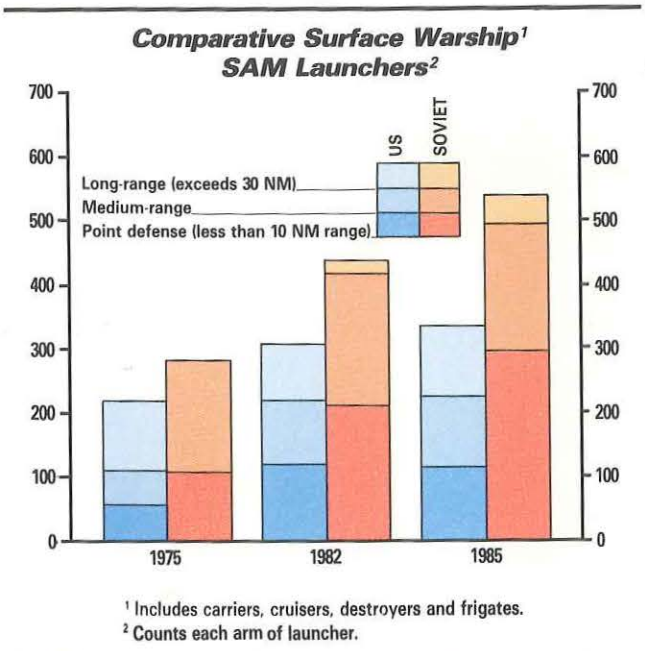


[1] All Soviet weapons in these categories are nuclear cabable.

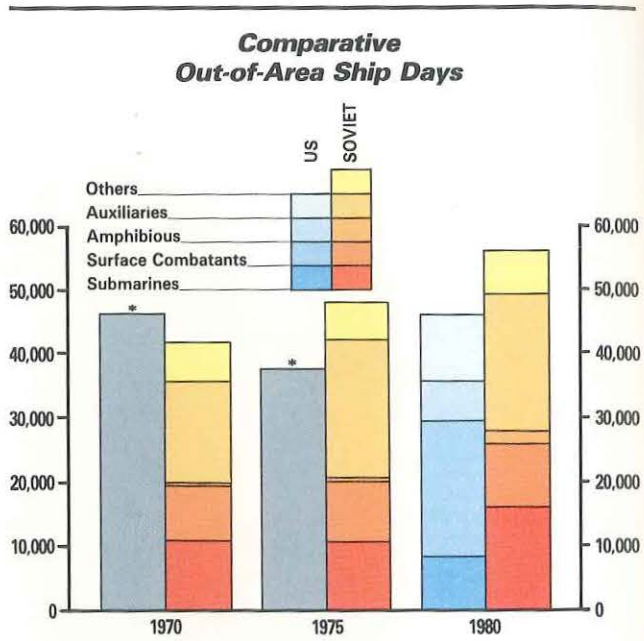
[2] Includes carriers, cruisers, destroyers, and frigates.



Guided Missile Destroyer SOVREMENNYY



[1] Includes carriers, cruisers, destroyers and frigates.
[2] Counts each arm of launcher.

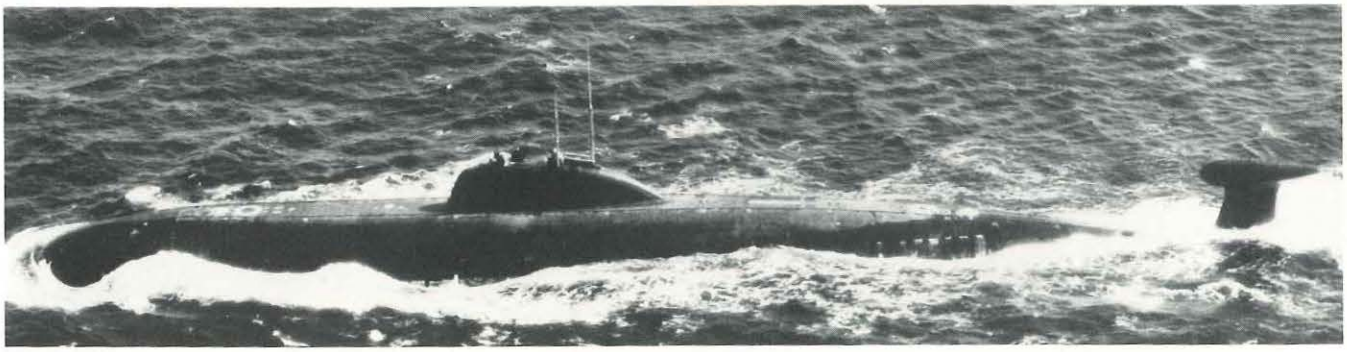


NOTE: 1970 and 1975 excludes auxiliaries and support ships.
* US numbers are not delineated by ship type but show total composite.

world's fastest—and the VICTOR III, fitted with the Soviets' first towed-array ASW sensor, are still entering the fleet at a rate of three per year. The TANGO-and KILO-Classes of diesel-powered attack submarines also continue to be constructed. The latter is currently being built and deployed only in the Far East, although deployments are expected to include the western fleets by 1984.

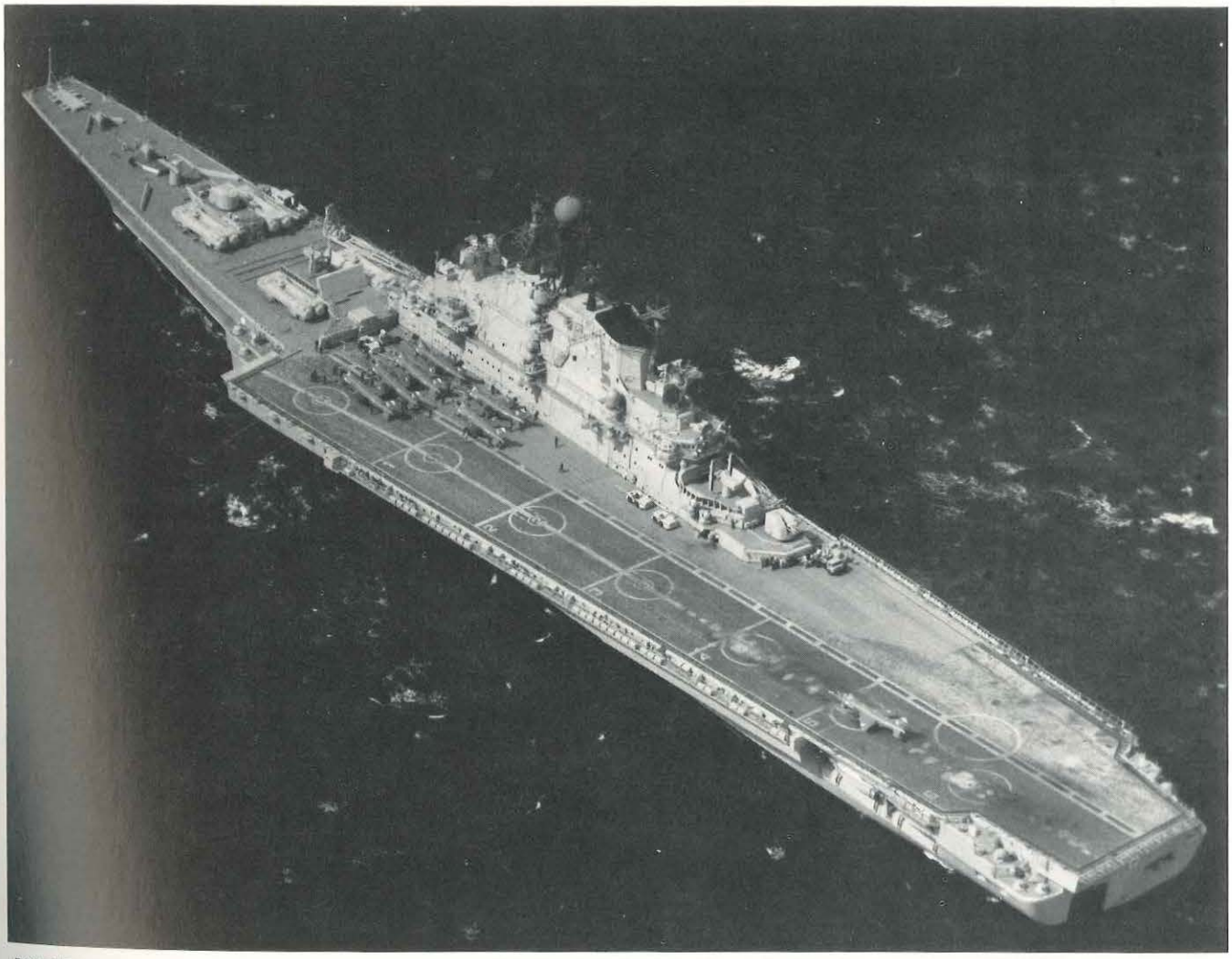
Among the aircraft still being built for Soviet Naval Aviation are the supersonic, variable-geometry wing BACKFIRE capable of carrying three 300-kilometer-range, MACH-3 air-to-surface antiship cruise missiles. The FORGER fighter-bomber also continues to be built to fill the air wings on the KIEV-Class carrier. In late 1982, this aircraft, carrying air-to-air missiles, conducted a close-range interception of a US Navy aircraft over the Indian Ocean.

In the near future, a new attack submarine will begin series production at two shipyards. This class will have significantly more capability than the older VICTOR III.



VICTOR III-Class Nuclear-Powered Attack Submarine





KIEV, Lead Ship of the KIEV-Class Guided Missile VSTOL Aircraft Carriers; at top, MINSK.

The Soviets soon will begin construction of a large, nuclear-powered aircraft carrier that will carry conventional take-off and landing high-performance jet fighters. The first ship of this new class will probably enter naval service late in the decade. The Soviets will also continue to improve the combat capabilities of their anti-ship and antisubmarine weapons and sensors so that by the 1990s they will have greater capabilities to fight naval battles on the high seas far from home waters.

NATO AND THE WARSAW PACT

In May 1982, the North Atlantic Treaty Organization published the *NATO and the Warsaw Pact—Force Comparison* study, which portrayed the magnitude of the threat posed by the Warsaw Pact. This publication comparing NATO and Warsaw Pact Forces carried the authority of all the NATO nations that participate in the integrated military structure of the Alliance. The US position at the US-Soviet INF talks in Geneva was developed in coordination with the NATO Allies and is based on the Alliance estimate of the Warsaw Pact threat discussed in this study. The NATO Alliance will soon update this force comparison study to reflect the changes that have occurred since it was issued. While specific data may change, the magnitude of the threat will not. Displayed in the following charts and graphs is the comparison of NATO and Warsaw Pact forces that was carried in the 1982 NATO study.

NATO/Warsaw Pact Combat Aircraft in Place in Europe

	Fighter-Bomber Ground-Attack	Interceptor[1]	Reconnaissance	Bomber
NATO	1,950	740	285	—
Warsaw Pact	1,920	4,370	600	350

[1]Many interceptors can be used in ground-attack roles.

NATO Naval Forces[1]

	1971	1981
Aircraft carriers	9	7
Helicopter carriers	6	2
Cruisers	11	15
Destroyers/frigates	381	274
Coastal escorts and fast patrol boats	180	167
Amphibious ships		
Ocean-going	24	41
Independent coastal craft	62	69
Mine warfare ships	349	257
Total submarines	195	190
Ballistic missile submarines	38[2]	35[2]
Long-range attack submarines	72	60
Other types	85	95
% NATO submarines nuclear powered	50%	49%
Sea-based, tactical and support aircraft including helicopters	801	712
Land-based tactical and support aircraft	112	180
Land-based anti-submarine warfare fixed-wing aircraft and helicopters	471	450

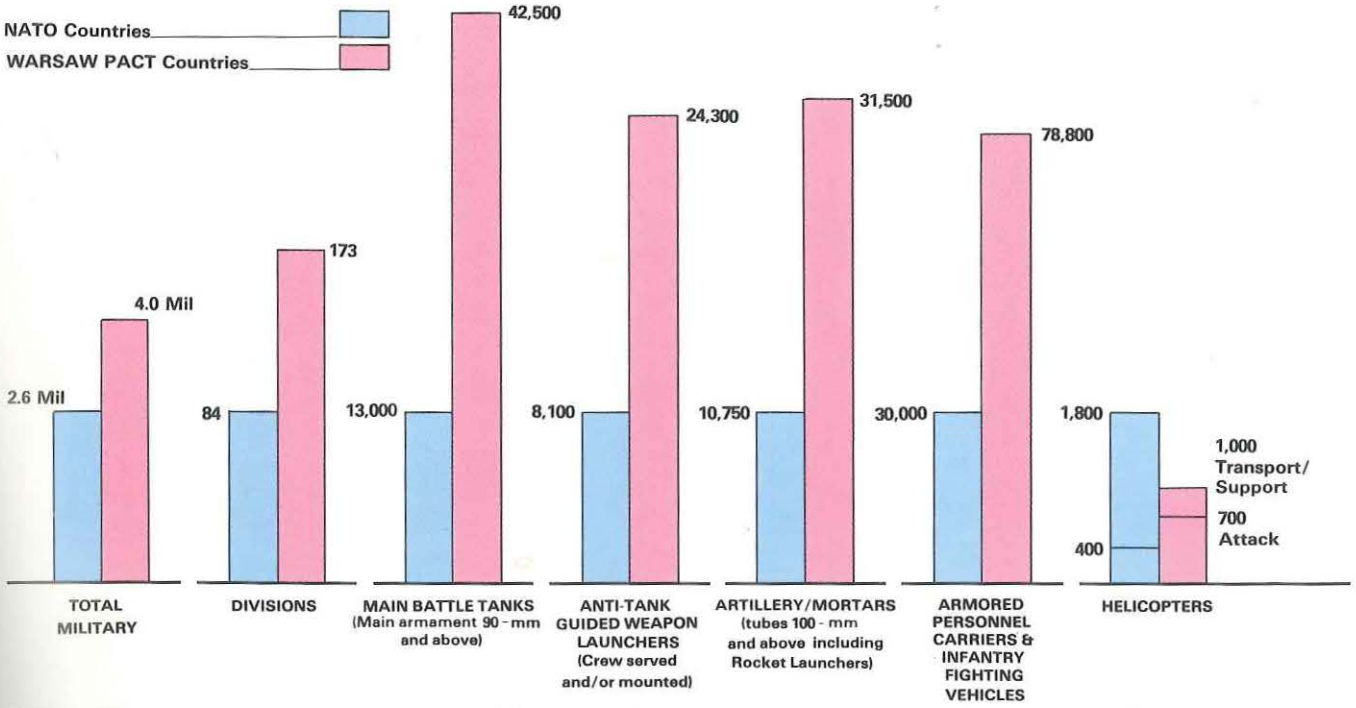
[1] Includes forces allocated to the European and Atlantic areas.
[2] Also referred to in the section on Nuclear Forces.

Warsaw Pact Naval Forces[1]

	1971	1981
Kiev class ships	0	2
Helicopter carriers	2	2
Cruisers	20	21
Destroyers and frigates	142	182
Coastal escorts and fast patrol boats	553	551
Amphibious ships		
Ocean-going	7	16
Independent coastal craft	190	155
Mine warfare ships	374	360
Total submarines (all types)	248	258
Ballistic missile submarines	38[2]	52[2]
Long-range attack submarines	115	149
Other types	95	57
% Submarines nuclear powered	32%	45%
Sea-based, tactical and support aircraft including helicopters	36	146
Land-based tactical and support aircraft (including some transport aircraft and transport helicopters)	521[3]	719[3]
Land-based anti-submarine warfare fixed-wing aircraft and helicopters	225	179

[1] Excluding the Pacific Fleet.
[2] Also referred to in the section on Nuclear Forces.
[3] About 300 of these are bombers.

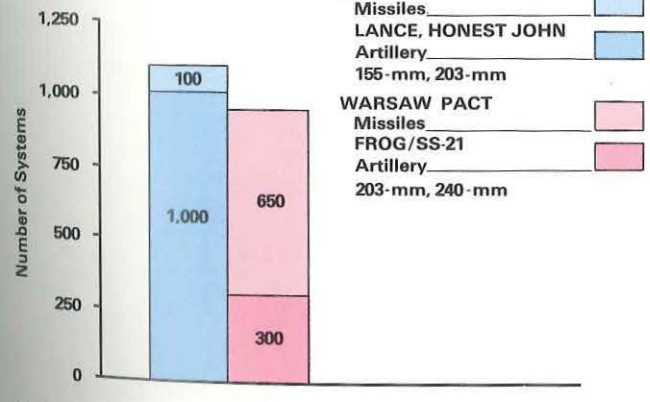
NATO-WARSAW PACT Force Comparison (In place in Europe—1981)



NOTES: Warsaw Pact Divisions normally consist of fewer personnel than many NATO Divisions but contain more tanks and artillery, thereby obtaining similar combat power.

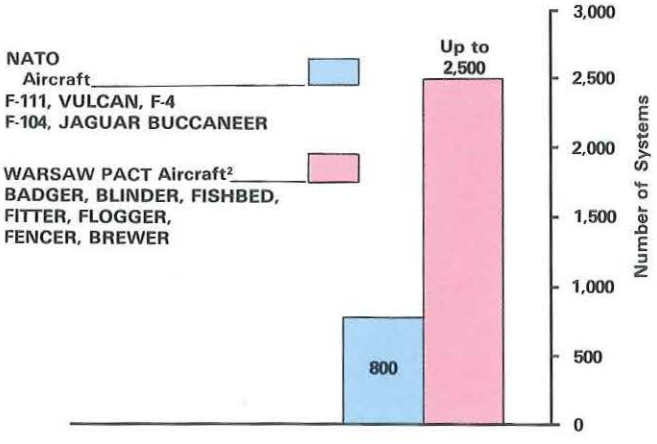
Forces in place in NATO Europe, Warsaw Pact Forces as far east as but excluding the 3 Western Military Districts in Western Russia (Moscow, Volga and Ural Military Districts).

Number of Short-Range Nuclear Forces (SNF) at End of 1981[1]



[1]For NATO the data reflect forces deployed in NATO Europe; for the Warsaw Pact forces facing NATO Europe.

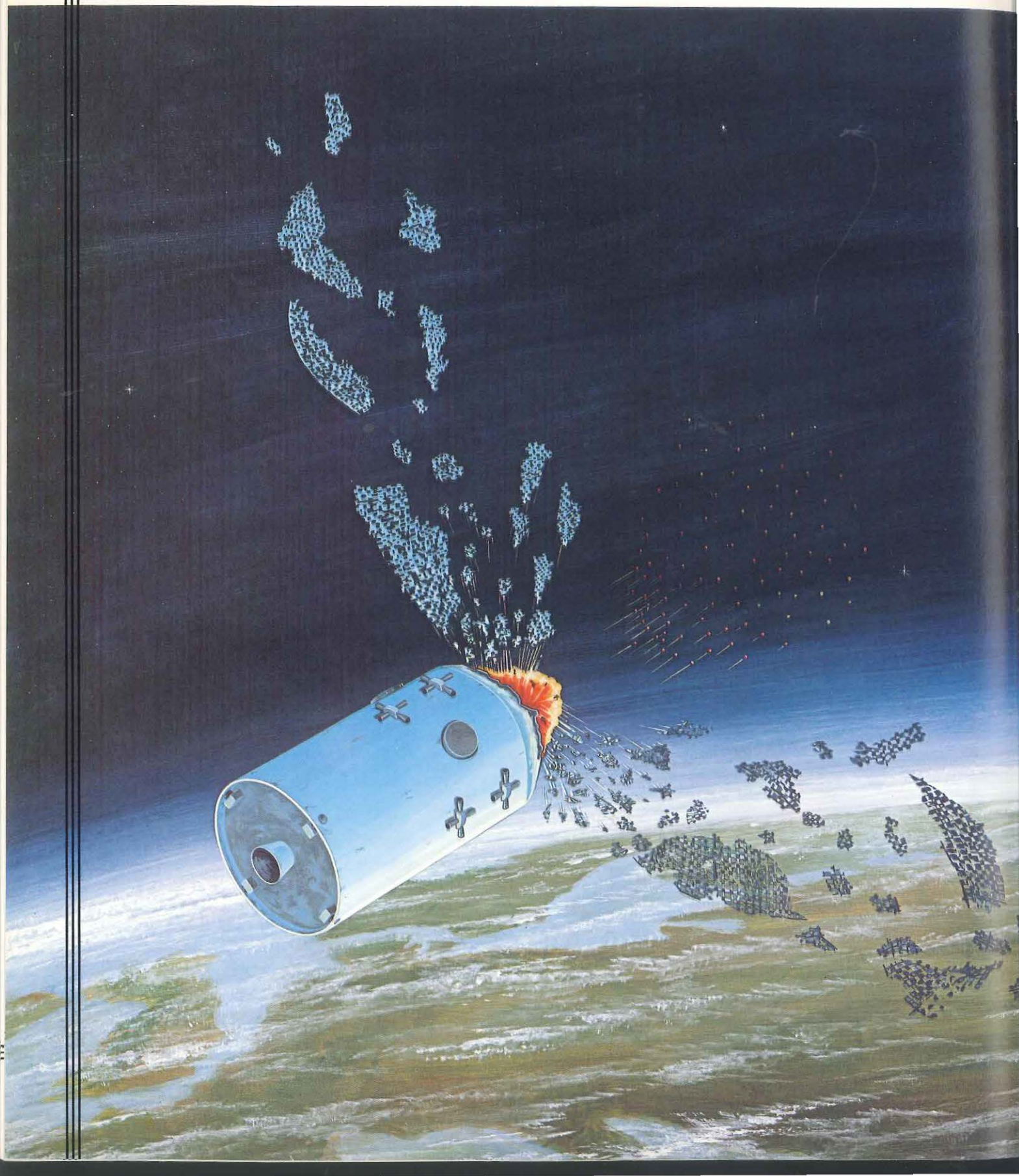
Land-Based INF Aircraft in 1981[1]



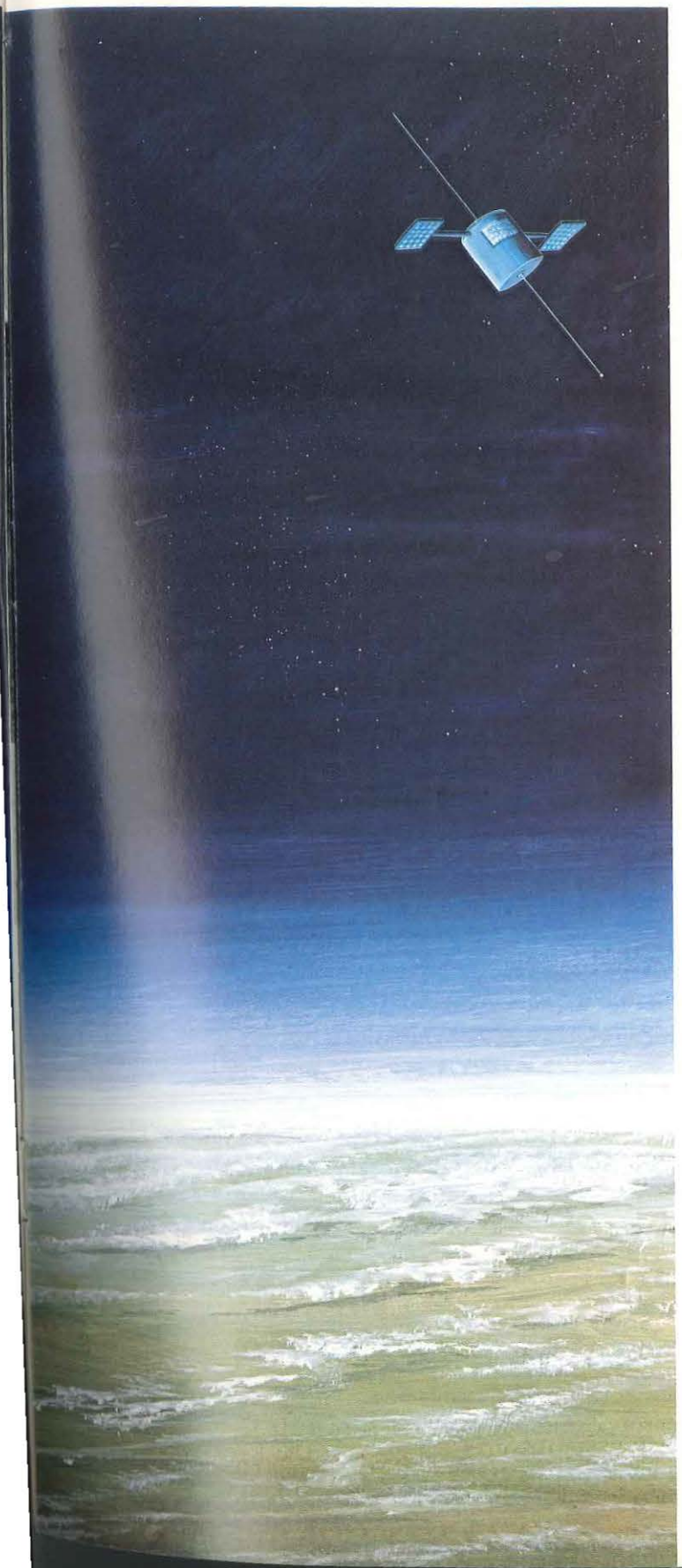
[1] Numbers include land-based maritime aircraft.

[2] The BACKFIRE bomber has been included in the strategic section because it has an inherent inter-continental capability although in its maritime and European land-attack roles it poses a serious threat to NATO Europe.

IV SOVIET SPACE SYSTE



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The Soviet quest for military supremacy has expanded into space. With the development and employment of an orbital antisatellite (ASAT) weapon over a decade ago, the Soviet Union clearly signaled its recognition of space as an arena in which to conduct war.

In the past ten years, the USSR has been launching more than 75 spacecraft per year, a rate of four-to-five times that of the United States. Over the past few years, the rate has been close to 100 annually. The annual payload weight placed into orbit by the Soviets is even more impressive—660,000 pounds—ten times that of the United States. This level of effort reflects the importance the Soviets attach to their space programs; it also reflects some technological weakness in the areas of longevity and flexibility. Soviet military and military-related space programs range from extended manned missions, to meteorological, communications, navigational, reconnaissance, surveillance, targeting and antisatellite missions. The magnitude of the Soviet space program comes into even clearer focus with the realization that the USSR currently has under development a heavy-lift space launch system, comparable to the US SATURN V, that will be able to place payloads at least six to seven times the weight of those of the US space shuttle into orbit.

Since the USSR's successful launch of SPUTNIK 1 in 1957, the Soviets have pursued a vigorous, deliberate and methodical program to exploit space for military purposes. The initial Soviet use of space for military applications occurred in 1961 with the launch of their first photographic reconnaissance satellite. Throughout

Soviet military space capabilities pose an ever-increasing threat to US land, sea and air forces and US space missions. The USSR's orbital antisatellite (ASAT) weapon is now operational and tested each year; it is designed to destroy space targets with a multi-pellet blast.

the 1960s and 1970s, Soviet military space programs expanded in both scope and numbers. By the advent of the space shuttle era, these programs had developed into mature, integrated systems for the direct and indirect support of Soviet military forces, and with the capability to threaten low-altitude US and allied satellites.

The military, political, and economic value of Soviet space programs dictates that general control and direction of the Soviet space effort rest with the Politburo. The fundamental decisions for military space system research, design, development, testing, and production at the national level are made in the Soviet Defense Council. Both of these organs are headed by General Secretary Andropov. Actual program management, however, is overseen by the Military Industrial Commission, which reports directly to the Council of Ministers. All five components of the Armed Forces take part in the development and operation of the Soviet space program. The Strategic Rocket Forces provide the launch and tracking support.

The USSR has invested heavily in three extensive space assembly and launch complexes at Tyuratum, Plesetsk and Kapustin Yar. Each of these complexes is protected from external attack by surrounding networks of air defense, including manned interceptor bases and surface-to-air missile complexes. New launch facilities are being built at Tyuratam to handle the newest generation of Soviet heavy-lift space boosters that will move from the developmental to the operational stage in the second half of this decade. These boosters include one in the SATURN V class, another somewhat smaller expendable booster and a reusable system similar to the US shuttle. Additional developments include newer spacecraft with greater flexibility; upgrading of command, control and tracking sites; upgrading of ships dedicated to supporting space activities and expansion of production, research, development and test facilities.

On any given day, 70-110 Soviet satellites are in orbit, more than half of which serve military purposes solely. Some 85 percent of all Soviet space launches are exclusively military or joint military/civilian missions. The resources required to sustain this effort are enormous. The Soviet space program in the past has relied heavily on modified ballistic missiles for space system boosters. Eleven of 14 launch systems successfully flown by the Soviets have used stages from ballistic missiles. The two new expendable systems expected to have their first flights in the 1984-87 time period have been designed from the ground up as space systems. In keeping with past Soviet practice, several versions of each of these systems will probably be developed to support many different space missions.

Current evidence indicates that the Soviets are developing a reuseable space system, similar to the US space shuttle and a smaller space plane. Orbital developmental test flights of the smaller vehicle have already occurred. These systems could be in regular use within a decade and will further expand the military flexibility and capability of the Soviet space effort.

Soviet manned space missions are becoming increasingly complex and constitute the single most extensive element of the Soviet space program. After accomplishing many firsts in the early 1960s, including the first man in space, the Soviet manned program was overshadowed by the US manned program during the late 1960s. Since 1971, the Soviets have placed seven space stations in orbit. Indeed, there was not one US manned space mission from 1975 to 1981. The first SALYUT-I manned space station was launched in 1971. A second type of SALYUT station was launched in 1973. Both were capable of conducting military research.

In 1977, the Soviets launched SALYUT-6, a small space station complex, which had a second docking collar to accommodate the PROGRESS cargo vehicle and the SOYUZ cosmonaut ferry. These features provided the Soviets with the capability to resupply and exchange personnel on their SALYUT space stations. On three occasions the Soviets have conducted manned missions lasting as long as six months, with the longest mission 211 days, almost three times greater than the longest, 84-day, manned US mission in 1974. Soviet cosmonauts have amassed twice as many man-hours in space as US astronauts.

The Soviet commitment to their manned space program is growing. The development of a large manned space station by about 1990 to maintain a military presence in space is one of the goals of the new heavy-lift launcher systems now in development. In addition to space stations expected by 1990, the Soviets will use the heavy-lift space boosters to orbit even larger space stations and space modules before the end of the century. Such space stations could weigh more than 100 tons and be able to support a large crew for extended periods without replenishment.

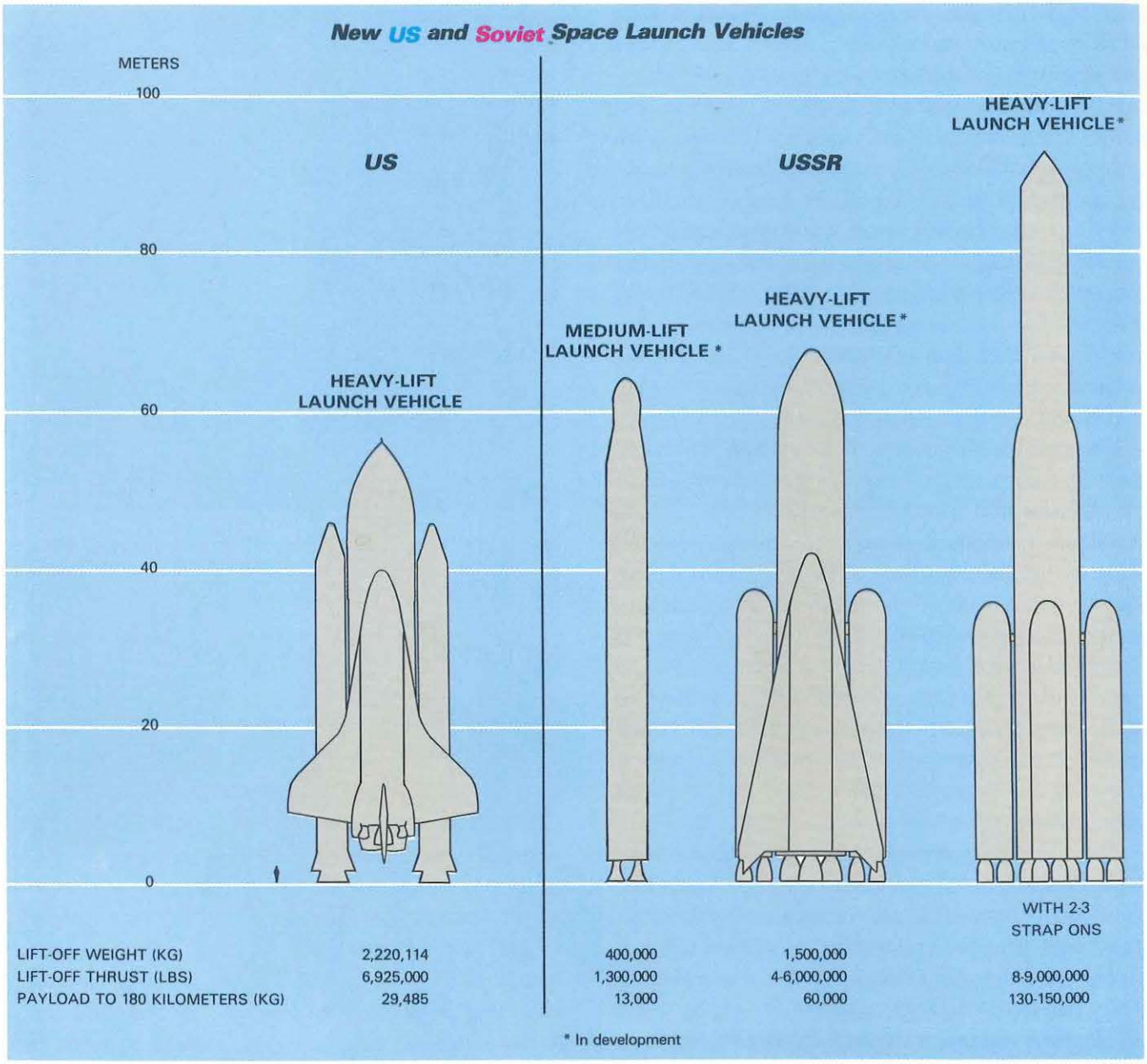
The USSR's introduction, application and known future development of space weapon systems point to a coordinated program involving:

- the present generation of antisatellite vehicles, now operational and designed to destroy low-orbiting satellites,
- a very large, directed energy research program including the development of laser-beam weapons systems which could be based either in the USSR, aboard the next generation of Soviet ASATs or aboard the next generation of Soviet manned space stations.

The ASAT system, which is now operational, has the capability to seek and destroy US space



SOYUZ-39 Mission Launch



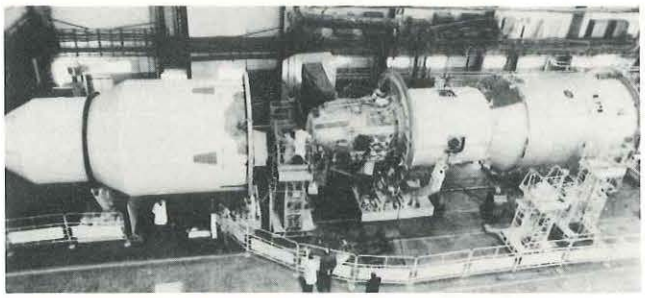
systems in near-earth orbit. The Soviets conduct yearly tests to practice satellite interception and to refine the ASAT system. One direction of the Soviet Union's space weapons program is toward the development and deployment of a space-based laser system. The Soviets could launch the first prototype of a space-based laser antisatellite system in the late 1980s or very early 1990s. An operational system capable of attacking other satellites within a few thousand kilometers range could be established in the early 1990s. Space-based ABM systems could be tested in the 1990s, but probably would not be operational until the turn of the century.

The Soviets have steadily increased their space photographic and electronic reconnaissance effort since the early 1960s. Each year over 50 of these satellites are launched to support military forces on a daily basis. The several different satellite systems in use provide target location, target identification and characterization, order-of-battle, force monitoring, crisis monitoring and situation assessment, geodetic information for ICBM targeting and mapping for military forces.

The Soviet military space program also reflects an ever-increasing use of space for worldwide surveillance and warning. The Soviets have brought a number of US and Allied military forces under surveillance by these space-based systems. The surveillance satellites include an ICBM launch detection system and ocean surveillance systems, such as the two RORSAT satellites with nuclear-powered generators that caused worldwide alerts during their breakup and reentries to earth in 1978 and early 1983. Soviet efforts in the surveillance field are expected to lead to a multi-satellite detection, surveillance and attack-warning system against strategic and non-strategic ballistic missiles and possibly bombers, as well.

The Soviets are increasing their use of space systems for command, control, and communications. Since the mid-1960s when the first Soviet MOLNIYA communications satellite was launched, the USSR has continued to improve and expand its communications satellite programs to support its political leadership and its military, diplomatic and intelligence missions.

The Soviets are emphasizing the development of communications networks using satellite systems that will be placed in geostationary orbits. Currently, the geostationary satellites—GORIZONT, RADUGA, and EKRANs—occupy orbits with the announced function of fulfilling part of the Soviet domestic and international



Final Testing of SALYUT-7 Before Launch

communications requirements. These satellites could also provide military communications to ground, sea and air elements of the Soviet Armed Forces.

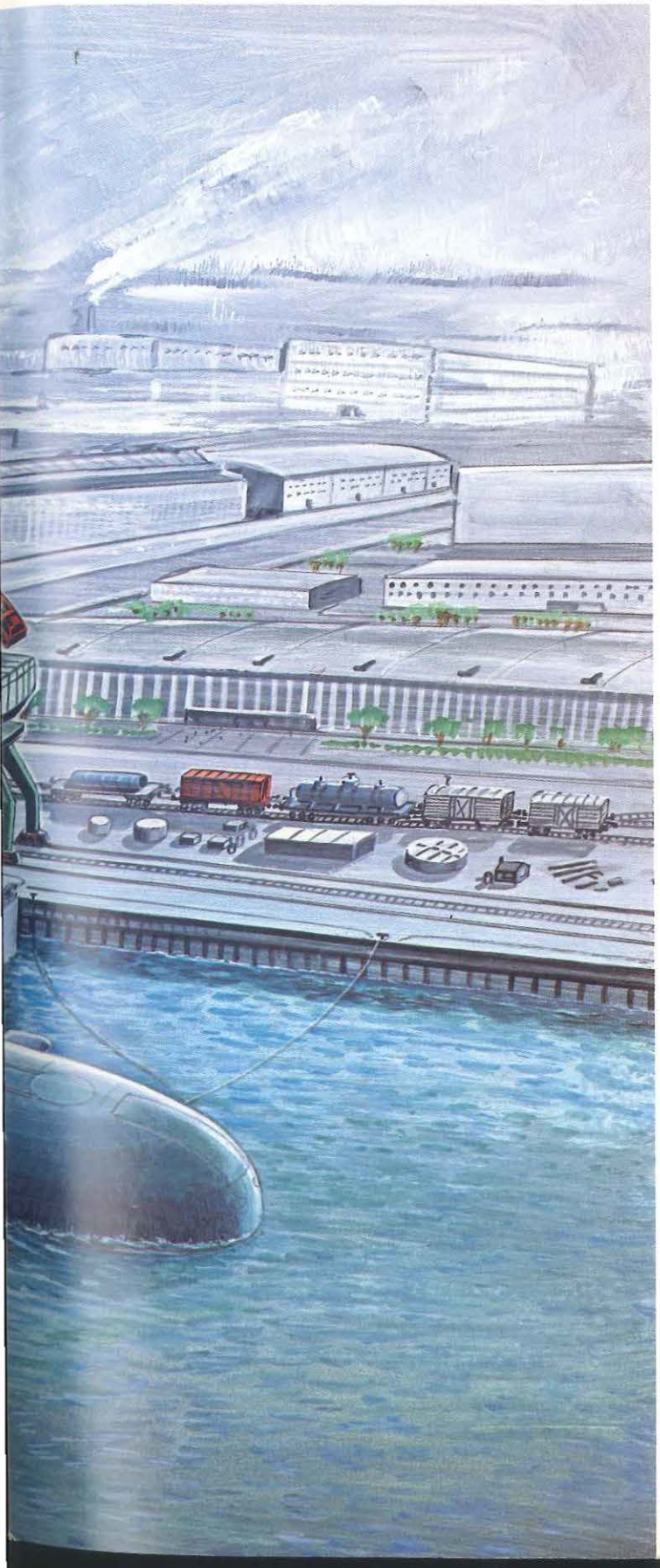
The Soviets have embarked on an ambitious expansion of their communication satellite program that will add measureably to their global command, control and communications capability. Over the next ten years, the Soviets will develop and deploy an even more advanced series of communication satellites, some of which might relay transmissions from manned orbital command and control platforms.

The majority of Soviet military space programs has been specifically designed to support terrestial military operations. However, the development of an antisatellite system has extended Soviet military use of space to a capability for direct space warfare operations. It is important to re-emphasize the size of the Soviet program, demonstrated by a launch rate that is four-to-five times that of the United States, and the size of the Soviet annual payload weight placed into orbit, 660,000 pounds—ten times that of the United States.

V RESOURCES AND TEC



HNOLOGY



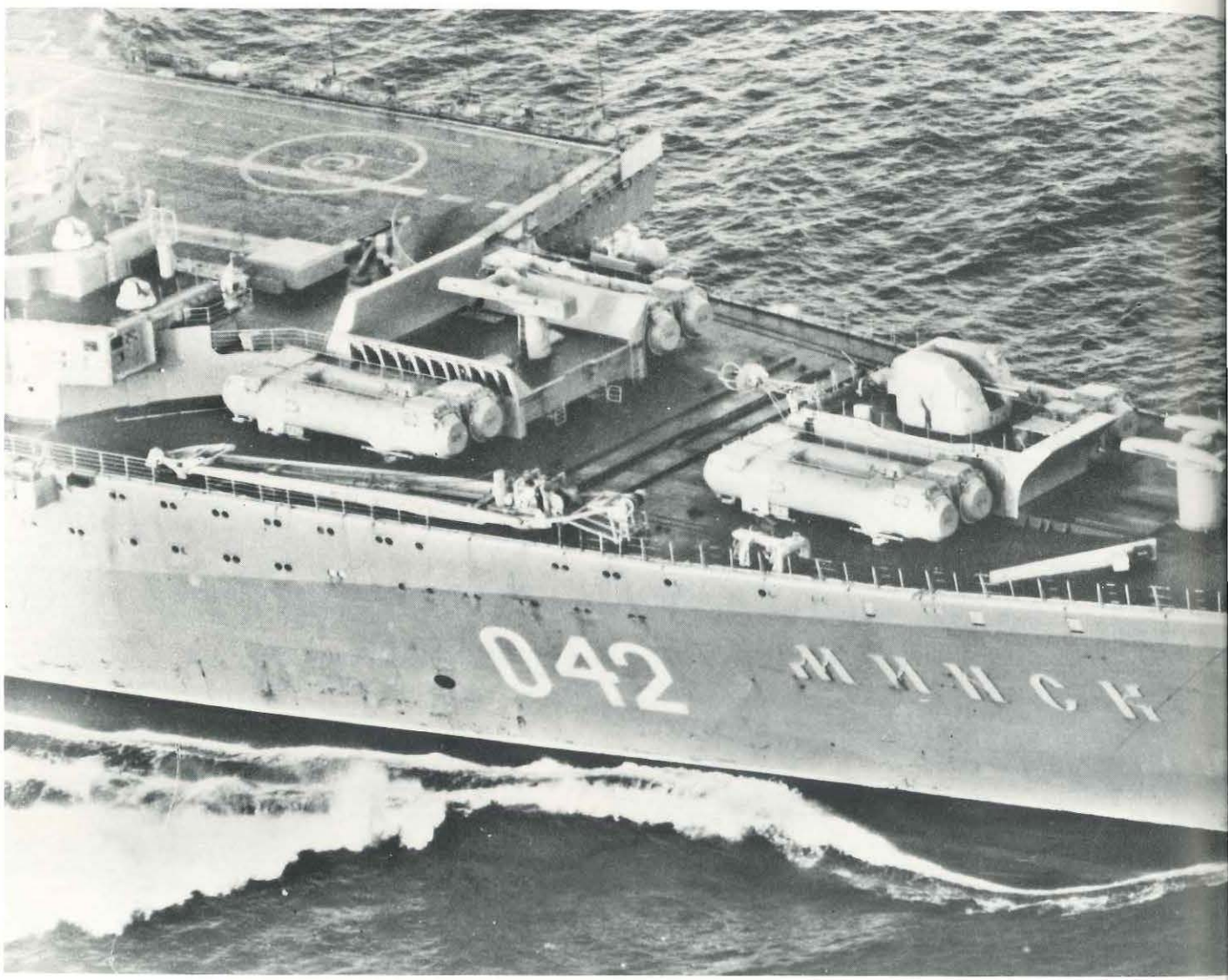
For the Soviet Union, the goal of world leadership in science and technology includes a high level of resource commitment that essentially involves the integration of two approaches:

- The establishment and expansion of a large indigenous technology and production base to support their industrial and military development programs.
- The acquisition and assimilation of Western technologies to reduce the time, cost and risk involved in supporting their industrial and military programs. The Soviet political and military intelligence organizations, the KGB and the GRU, have for years been training scientists and engineers to target and acquire advanced, militarily useful technology from the United States, Western Europe, Japan, and elsewhere. In this way, they have acquired technology worth many billions of dollars, some of it by purchase, legal or illegal, or by theft, espionage, bribery, scientific exchanges and exploitation of US open literature. The USSR is thus able to design and produce new Soviet weapons, saving a great deal of time, effort and resources in the development stages. For example, the Soviets have achieved new capabilities through exploitation of Western guidance and radar systems and Western production methods.

The result has been a sharp narrowing of the technological gap between the US and USSR.

Although the US continues to lead the Soviets

The second unit of the USSR's newest OSCAR-Class nuclear-powered cruise missile attack submarines is fitting out at the Severodvinsk Shipyard on the White Sea. This yard is one of five in the USSR providing the Soviet Navy with the world's largest submarine force.



in most basic technologies, such as the militarily critical area of electronics, this lead is now not nearly so apparent in the modern, highly capable weapon systems fielded by the Soviet Union in recent years. The number and quality of new ground, naval and aerospace weapon systems developed by the Soviets are impressive by any standard.

To support their extensive military build-up, the Soviets have a well-established, centrally controlled system that includes a core of nine industrial ministries heavily involved in military programs—the Soviet "Defense Industrial Sector." Subject to Soviet defense direction, these ministries design the weapons, develop the prototypes, and, as they pass the Ministry of Defense evaluation trials, produce the weapons.

Manpower and Production Resources: The Soviets have the world's largest R&D manpower base—estimated at over 900,000 scientists and engineers in 1982, compared to less than 700,000 in the United States. The percentage of



The foredeck of the aircraft carrier MINSK presents a broad spectrum of the Soviet shipboard weaponry: (from right to left) RBU-6000 ASW rocket launchers, SUW-N-1 long-range rocket launchers, twin 76-mm dual purpose gun, four dual SS-N-12 surface-to-surface missile launchers, SA-N-3 surface-to-air missile launchers, and 30-mm ADGM Gatling guns.

Soviet R&D manpower engaged in defense-related work is high—estimates range from 50-to-75 percent of the USSR's scientific and technical force. In 1982, the Soviets graduated over 300,000 engineers from their five-year, first degree engineering schools—nearly five times the number graduated by the United States. Approximately 80 percent of Soviet advanced degrees last year were in scientific and technical fields as compared with about 40 percent of the US advanced degrees. The US, however, graduates significantly more with advanced managerial degrees than the Soviets, highlighting US managerial strength and comparative Soviet weakness in this field.

Soviet capital investments in those ministries responsible for ground, naval and aerospace weapon systems have continued at a rate unmatched by any other country for at least two decades. In the strategically important aerospace sector, Soviet research institutes, design bureaus and test facilities have expanded significantly over the past decade alone. The ground and naval research, development and technology (RD&T) bases have also expanded at an impressive rate.

In order to support their growth in military power, the Soviets have built the world's largest military industrial base. This base has grown steadily and consistently over the past 20 to 25 years. The cyclical production of new and upgraded weapons, continuing facility growth, and high rate of production keep the arms industry in a state of constant operation. The industry now includes over 150 major plants throughout the USSR, producing ships, aircraft, missiles, armored vehicles, artillery, ammunition and explosives. These plants are supported by a network of thousands of feeder plants. In addition, the Soviet Union has a large industrial base providing the electronics and telecommunication gear required to support its military operational requirements as well as a large and still expanding truck industry largely built with Western technology; the Kama River Truck Plant is the most recent example.

The industrial floorspace committed to production of the Army's weapons has continued to expand since the mid-1970s. In 1982, the Nizhniy Tagil Railroad Car and Tank Plant manufactured 2,000 main battle tanks—the T-72, and the latest Soviet tank, the T-80.

Construction at the Severodvinsk Naval Shipyard, the world's largest shipyard geared for submarine production, illustrates the growth of naval sector facilities. Since 1967, floorspace has increased by several hundred thousand square meters, or approximately three-quarters again the yard's size in 1965. Moreover, Severodvinsk is only one of several Soviet yards producing submarines. Twenty-three other major shipyards have been expanded during the same period; four new yards have been built.

In the aerospace industry, new, large final-assembly buildings have been built at nearly every established plant. A wholly new, large aircraft plant is under construction. This plant, when completed, will probably be used to fabricate and assemble large aircraft—transports and bombers. Qualitative improvements in production technology, which typically accompany new and more sophisticated aircraft, have paralleled the physical growth of the industry.

In recent years, the military has absorbed 15 percent of the Gross National Product as compared to less than seven percent for the United States—and if current trends continue, the Soviet military's share of the GNP will approach 20 percent by the late 1980s.

The cumulative dollar costs of Soviet investment for the decade were 80 percent higher than US investment outlays. The estimated dollar costs for the Soviets were more than twice the US outlays in the mid-1970s, but, because of the slower growth of Soviet programs and growth in US costs, this margin had decreased somewhat by 1981. The slower growth of Soviet programs during the period was due to the cyclical nature of Soviet military production. The large Soviet research and development effort, coupled with observed expansion in military production facilities, suggests that the dollar costs of Soviet military procurement activities may soon resume their historical growth. The estimated dollar costs for Soviet RDT&E were 70 percent greater than US RDT&E outlays for the period as a whole, and were more than twice as great in 1981. The dollar operating costs for Soviet activities were about 25 percent higher both for the period and in 1981. The defense sector is unquestionably the first priority of Soviet industrial production, whatever the cost to other sectors of the Soviet economy.

The Soviet Union and the countries of the Warsaw Pact have, over the past decade, faced deteriorating economic performance while at the same time sustaining high levels of military equipment production for an across-the-board force modernization. The Soviet economy is besieged by growing resource scarcities, higher production costs and by competing priorities between sectors. Food shortages, low labor productivity and transportation disruptions have combined to bring industrial growth to a post-1945 low. Externally, the high cost of supporting other Communist regimes, also in difficulty, such as Cuba, Vietnam, Afghanistan, and Poland, create an additional burden.

TECHNOLOGY

The large, sustained Soviet investments in manpower, fiscal and material resources have narrowed and in some cases closed the technological gap between the West and the USSR over the past decade. Technology transfer has played a central role. In many key technologies used in deployed weapons systems there is no gap at all. The difference between the general and the military technological levels of the West and the USSR results from the top priority the

Soviets place on technologies and production critical to weapons performance. One cannot judge relative military technological capability by looking at an overall comparison alone.

In electronics, the Soviets are behind the West in overall capability, but are about equal in terms of electronics used in deployed weapons. Deployed Soviet military computers are no less capable than those used in the West even though Western computer capabilities in general exceed those of the USSR. This is because Soviet military computers are on the leading edge of their technology while those in the West tend to lag the state-of-the-art by a wide margin. The same circumstances apply to communications equipment. Soviet propulsion capabilities reflect Moscow's emphasis on ballistic and cruise missiles and on a variety of naval combatants. In these areas the Soviets rival the West and in some—liquid missile propulsion, for example—Soviet capabilities are superior.

Directed Energy: For well over a decade now, the Soviets have devoted subtantial resources to those technologies applicable to directed energy weapons. Indications of Soviet interest in radio frequency technologies, particularly the capability to develop very high peak-power microwave generators, indicate that the Soviets intend to develop such a weapon. There is also a considerable research effort within the Soviet Union into technologies relevant to the development of particle-beam weapons.

For many years, the Soviets have devoted significant resources to the development of laser-beam weapons. Their high energy laser program is three-to-five times the US effort. They have built numerous classified facilities dedicated to the development of these weapons.

The Soviet program began in the mid-1960s. They are pursuing chemical laser development and have continued to work on the earlier high energy laser candidates, the gas dynamic laser and the electric discharge laser. They are also pursuing related technologies such as the development of efficient electrical power sources and the capability to produce high-quality optical components in quantity. They have developed a rocket-driven magnetohydrodynamic (MHD) generator which produces 15 megawatts of short term electric power—a device that has no counterpart in the West. The Soviets are committed to the development of specific laser weapon systems. Soviet development of moderate-power weapons capable of short-range ground-based applications such as tactical air defense and anti-personnel weapons, may well be far enough along for such systems to be fielded in the mid-1980s. In the latter half of this decade, it is possible that the Soviets could produce laser weapons for several other ground, ship and aerospace applications.

TECHNOLOGY TRANSFER

Soviet foreign technology acquisition policy, for both legal and illegal acquisitions, is directed first and foremost at enhancing military industrial capabilities. Western technology transfer contributes to Soviet military industrial capabilities: 1) by yielding a direct near-term military advantage through transfers leading to a Soviet technological breakthrough, filling a gap or overcoming a bottleneck in a mature Soviet technology; 2) by providing an indirect, long-term military advantage in helping to overcome technological lags in the Soviet industrial infrastructure; 3) by contributing to the overall growth of the Soviet economy by enhancing productivity; and 4) by releasing funds for military production.

The flow of Western technology, equipment and materials to the Soviet Union has made a considerable contribution to Soviet military-industrial capabilities. Industrial machinery and

products imported for the civilian industry often directly support the defense industries. Since a significant amount of defense production occurs in the machinery sector, it is likely that at least half of the machinery acquired from the West contributes to defense production. Western, government-backed, low interest credits and loans provided to the Soviets have underwritten this trade and greatly facilitated the development and serial production of modern weapons. For example, since the mid-1970s, the US, its Western Allies and Japan together have been the source of one-fourth of total Soviet machinery imports. This one-fourth represents the most advanced machinery that the Soviets have been able to acquire. More than 40 percent of these Western machinery imports have been for the metalworking and chemical industries—major contributors to Soviet defense production. Much of the remainder of Soviet machinery imports were acquired from East European sources, the technology of which generally falls well below that of Western and Japanese machinery.

The Soviet Union has undertaken a large-scale program to acquire Western technology by covert means in addition to its legal acquisition efforts. The Soviet intelligence services

USSR: Imports from NATO Countries and Japan by Major Machinery Import Categories, 1976-1980 and 1981 (percent)

Major Machinery Import Categories	*1976-1980 (annual average)*	*1981*
Chemicals	32.1[1]	15.7
Metalworking	9.7	12.1
Heavy Vehicles	3.7	11.5
Oil Drilling & Exploration	3.5	3.9
Other Machinery[2]	51.0	56.8
TOTAL	100	100

[1] These imports of Western chemical equipment represent 67 percent of the total Soviet investment in chemical equipment over the 5-year period—1976-1980.

[2] Includes over 20 sub-branches of machinery production, ranging from power machinery and precision instrumentation to machinery for the light and food industries.

Defense Production Responsibilities of Civilian Industry

Civilian Ministry	*Examples of Military Product Lines*
Automotive Industry	Armored personnel carriers, military trucks.
Chemical and Petroleum	Missile fuels and components, military and civil explosives.
Construction, Road and Municipal Machine Building	Military support equipment (trailers and missile launchers).
Electrical Equipment Industry	Aerospace, naval electrical systems; hydraulic mechanisms for gun-systems.
Heavy and Transport Machine Building	Tanks, tank destroyers, military support equipment (launchers, trailers, garages); turbines and pumps for submarines.
Instrument Building, Automation Equipment and Control Systems	Military computer-related equipment.
Machine Tool and Tool Building Industry	Machine tools for defense industry.
Machine Building for Light and Food Industry and Household Appliances	Military logistical equipment.
Power Machine Building	Military generators.
Tractor and Agricultural Machine Building	Tracked personnel carriers, artillery, reconnaissance vehicles, off-road vehicles.

(KGB and GRU) along with the Eastern European intelligence services now have several thousand technology collection officers under a variety of covers ranging from diplomats to journalists and from trade officials to scientists and engineers. Acquisitions through illegal trade channels can have both military and industrial applications.

A former Soviet intelligence officer revealed an estimate that Western military-related technology acquired by Soviet intelligence has saved the Soviet defense industry hundreds of millions of dollars: for example, classified reports on advanced US weapon systems still under development. The classified reports included information on the F-15 look-down/shoot-down radar system, the B-1 bomber radar system, the PHOENIX air-to-air missiles, PATRIOT surface-to-air missiles, the improved HAWK surface-to-air missiles, and a NATO air-defense system. The Soviets stand to save hundreds of millions, if not billions, of dollars by now being able to utilize proven US designs to field counterpart systems—as well as effective defense and countermeasure systems—in a much shorter time and with less risk.

In other cases, Soviets have acquired image intensifier and processing devices, infrared detector materials, frequency analyzers, radar technology and remote sensing processing equipment—all with significant military applications. Soviet acquisitions have included finished semiconductors, integrated circuits, and the related manufacturing equipment and complete production plants, wire memory and magnetic bubble memory technology, computer software and computer-aided design and manufacturing technology. The Soviets have acquired hundreds—perhaps thousands—of computers and microprocessors, and in a number of instances have reverse-engineered these items for their own manufacture and use.

Propulsion: Such technologies as turbine blade-coating technology have been acquired as well as information on ceramic core and mold technologies for casting aircraft turbine blades. The Soviets may have acquired not only technical information on high-bypass-ratio, high-thrust turbofan engines, but an actual Western high-bypass turbofan engine as well.

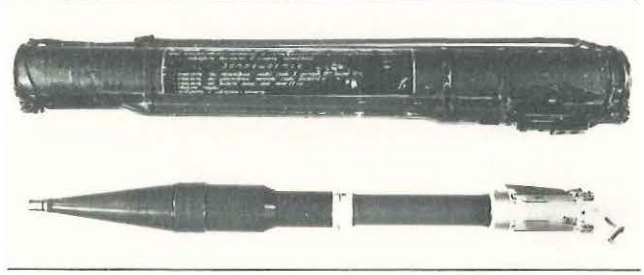
Materials: In the field of composite materials and associated equipment, the Soviets have obtained technology, materials and equipment involving graphite fiber production, powder metallurgy, glass technology, protective and radar absorptive coatings and materials testing equipment.

Chemical: Entire Western chemical plants and related chemical processing equipment have been purchased by the Soviets. Their acquisition of Western technologies, such as chemical catalyst processes, has had a major impact on the capabilities of the Soviet chemical industry. The industry benefited from an eight-fold increase in Western purchases between 1970 and 1978. Western purchases represented more than two-thirds of total Soviet chemical machinery investments between 1975 and 1980.

Production/Manufacturing: Soviet acquisition of Western precision machining, drilling, milling, grinding, gear cutting and reaming equipment has had significant impact on improvements in their manufacturing capabilities. Acquisition of precision ball bearing grinding machines, printed circuit board equipment, precision measuring and nondestructive testing equipment has also improved Soviet capabilities significantly.

Military Equipment: Weapons have been acquired legally in some cases, clandestinely in others, and through losses of US and other forces such as in Vietnam. Important technical information was gained on Western fuel-air ex-

plosives. A number of Soviet weapon systems, including their ATOLL air-to-air missile and several surface-to-air missiles reflect near mirror-imaging of deployed Western systems and their technologies. Many Soviet antipersonnel mines, antitank weapons and grenade launchers are close copies of Western equipment. A number of Soviet aircraft closely resemble deployed Western aircraft. The similarities are far greater than would be expected as the result of independent development efforts. A number of naval support systems have also been acquired, including large floating drydocks built by Japan and Sweden, which are being used to service some of the largest Soviet naval combatants. An illustration of a KIEV-Class carrier in one of these drydocks introduces the next chapter of this report. In ground transport, the Kama River Truck plant, built almost exclusively with Western technology, produces the Kamaz truck, now widely used in military transport roles.



Soviet RPG-18 Antitank Rocket, a close copy of the US LAW antitank weapon.

DEFENSE PRODUCTION

By any standard, Soviet military production over the past decade has been enormous and impressive, reflecting major investments made in the late 1950s and 1960s and the highest priority effort to the present day. The Soviets have systematically implemented their technological advances—taking advantage of emerging technologies—to improve their tactical and strategic forces. The following are a sampling of new weapons development milestones and achievements since 1970:

Fighter Aircraft: Six new series of advanced fighter aircraft have become operational. This includes the new close air support fighter-bomber Su-25/FROGFOOT, and the new MiG-25 variant FOXHOUND A look-down/shoot-down interceptor.

Bomber Aircraft: Two new bombers, the highly versatile BACKFIRE and the FENCER A which has capabilities as both a fighter-bomber and a mid-range bomber, have reached operational status. The new BLACKJACK strategic bomber is now undergoing test flights.

Transport Aircraft: Some 10 new types of transport aircraft, including the wide-body Il-86/CAMBER and the Il-76/CANDID, have become operational. A new wide-body transport is in prototype production. An AWAC version of the CANDID is likely to reach operational status in the very near future.

Helicopters: The USSR has produced approximately two new series of helicopters every

Aircraft Production USSR and NATO

Aircraft Type	*1978*[1]	*1979*[1]	*1980*[1]	*1981*	*1982*	*1981 NATO*[2]
Bombers	30	30	30	30	30	0
Fighters/ Fighter-Bombers	1,250	1,300	1,300	1,350	1,100	900
Transports	400	400	350	350	350	300
Trainers	50	25	25	25	25	30
ASW	10	10	10	10	10	10
Helicopters	650	750	750	750	700	800
Utility	100	100	50	25	25	100
Total	2,490	2,615	2,515	2,540	2,240	2,140

[1]Revised to reflect current information.
[2] Includes that produced by the United States; excludes France.

five years. This includes the extremely capable Mi-24/HIND attack helicopter and the Mi-26/HALO-A heavy-lift helicopters. The HALO-A, which became operational in 1982, is about twice the size of the largest US helicopter and more than doubles the Soviet's Mi-6/HOOK's lifting capacity.

Ballistic Missiles: The Soviets have deployed three new Intercontinental Ballistic Missiles (ICBMs), one new Long-Range INF missile, several new Short Range Ballistic Missiles (SRBMs), and four new Submarine Launched Ballistic Missiles (SLBMs)—a total of 10 new ballistic missile systems. In addition, there have been 13 ICBM modifications and five SLBM modifications. Two new ICBMs are now being test flown, and testing of others is expected to begin within the next year.

Missile Production USSR and NATO

Missile Type	1978[1]	1979[1]	1980[1]	1981	1982	1981 NATO[2]
ICBMs	225	225	250	200	175	0
LRINF	100	100	100	100	100	0
SRBMs	250	300	300	300	300	0
SLCMs	600	700	750	750	800	700
SLBMs	250	200	200	175	175	90
SAMs	53,000	53,000	53,000	53,000	53,000	6,900

[1] Revised to reflect current information.
[2] Includes that produced by the United States; excludes France.

Cruise Missiles: Soviet cruise missile development efforts have averaged four new systems every five years over the past decade. Technological advances have permitted the progressive development of missiles with longer ranges, increased reliability and increased accuracy.

Air-to-Air and Air-to-Surface Missiles: The Soviets have developed and fielded four new air-to-air missiles and eight variants. In addition, they have developed seven new tactical air-to-surface missiles.

Surface-to-Air Missiles: The Soviets have developed and deployed six new surface-to-air missile systems since 1970.

Submarines: The Soviets have developed and deployed a total of 14 new submarine classes since 1970. The new classes developed include the full range of nuclear-powered SSBNs, SSGNs, SSNs and diesel attack submarines.

Major Surface Combatants: Since 1970, the Soviets have developed and deployed at least 10 major classes of surface combatants including the nuclear-powered KIROV-Class cruiser, the KRASINA-Class cruiser, the KIEV-Class guided missile aircraft carrier and the UDALOY-Class and SOVREMENNY-Class destroyers.

Other Surface Combatants: Additionally, the Soviets have developed a steady stream of patrol, mine warfare and amphibious assault classes of combatants—an average of two new classes each year. The IVAN ROGOV-Class of amphibious assault ship is capable of carrying an entire naval infantry battalion and supporting vehicles, including air-cushion vehicles.

Naval Ship Construction USSR and NATO

	1978[1]	1979[1]	1980[1]	1981	1982	1981 NATO[2]
Submarines	13	12	13	11	8	10
Major Combatants	11	11	11	9	8	20
Minor Combatants	50	55	65	45	55	40
Auxiliaries	5	7	8	5	4	0

[1] Revised to reflect current information.
[2] Includes that produced by the United States; excludes France.

Armored Vehicles: Since 1970, the Soviets have produced an impressive series of armored combat vehicles—an average of one new system every two years.

Field Artillery: Since 1970, the Soviets have developed and deployed nine new artillery weapons systems—at least five of which are self-propelled. The new gun systems range in caliber from an 85-mm antitank gun to a 240-mm mortar. Several of the new systems are able to fire nuclear-warhead ammunition.

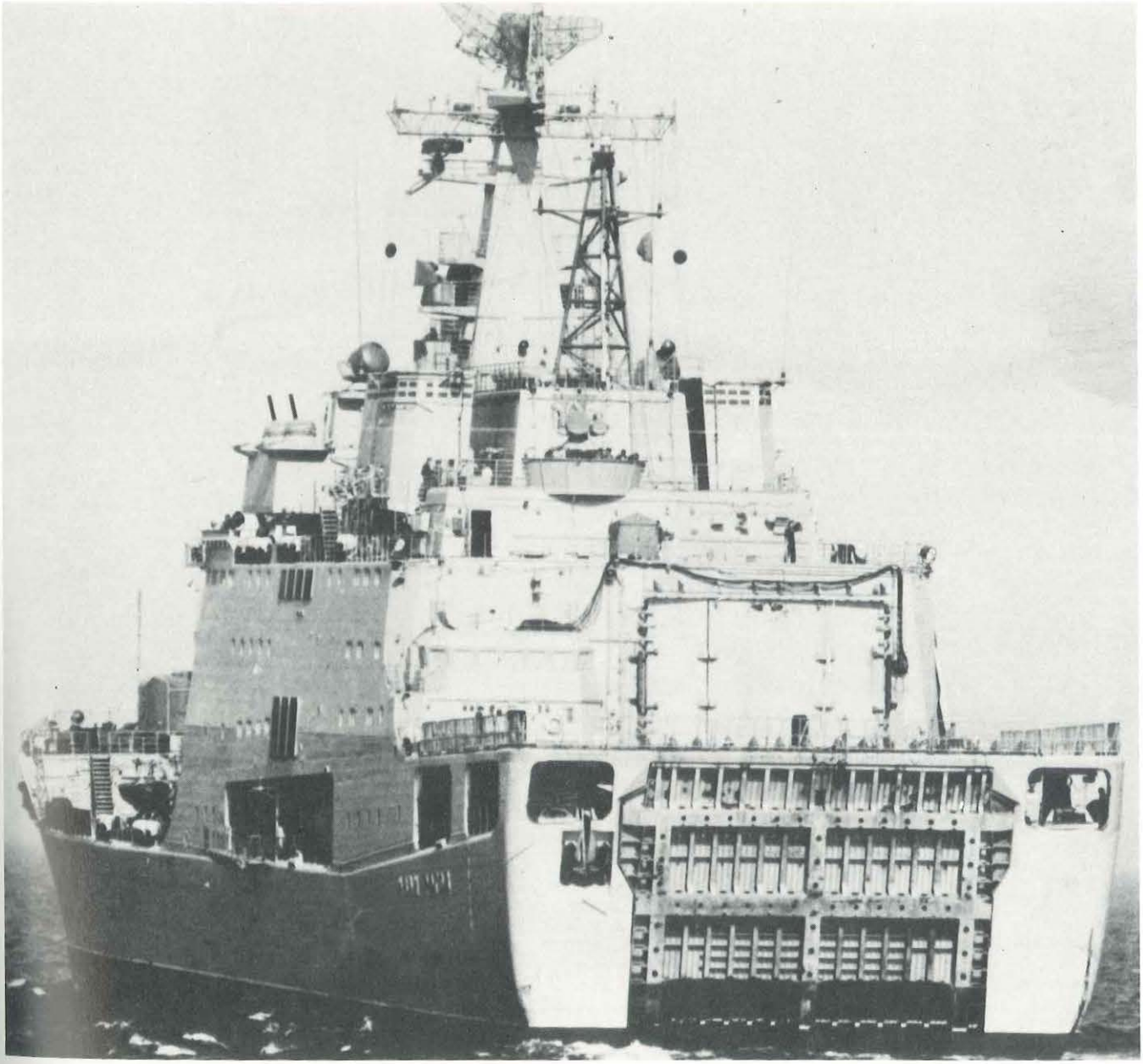
Tanks: For nearly two decades, the Soviets have been developing an average of one new tank every five years. During the 1970s, they developed and fielded first the T-64A and then the T-72 with their 125-mm smoothbore gun, automatic loaders and optical fire-control systems. A laser rangefinder is in use on some of these tanks. The Soviet Union's newest tank, the T-80, is now being fielded.

The Soviet military industry has grown steadily and consistently over the past 20-to-25 years. Its physical growth and the commitment of large quantities of financial and human resources are its most dynamic aspect, but its cyclical production is its most important. Production plants remain at work. As old weapons programs are phased out, new ones are begun, leaving no down times or long periods of layoffs and inactivity, although this procedure does produce plateaus and valleys in weapons procurement during the transition to new systems. The cyclical process, the continuing facility growth and the high rates of production keep the arms industry in a high state of readiness to meet any contingency and any demand for new weapons. The military production industry includes more than 150 major final assembly plants involved in producing weapons as end products. Over 3,500 individual factories and related installations provide support to these final assembly plants.

Production of Ground Forces Materiel
USSR/Non-Soviet Warsaw Pact and NATO

	1978[1]		1979[1]		1980[1]		1981		1982		1981
	USSR	NSWP	USSR	NSWP	USSR	NSWP	USSR	NSWP	USSR	NSWP	NATO[2]
Tanks	3,000	800	3,500	800	3,100	700	2,000	520	2,500	600	760
T-55	500	800	500	800	—	700	—	500	—	500	—
T-64	1,000	—	1,000	—	500	—	200	—	—	—	—
T-72	1,500	—	2,000	—	2,300	—	1,400	20	1,300	100	—
T-80	—	—	Trial Output	—	300	—	400	—	1,200	—	—
Other Armored Fighting Vehicles	5,500	1,800	5,700	1,625	6,300	1,450	5,200	1,250	4,500	1,450	960
Towed Field Artillery	1,300	110	1,500	160	1,400	160	1,600	210	1,700	260	160
Self-Propelled Field Artillery	700	—	500	10	300	50	400	50	500	50	300
Multiple Rocket Launchers	550	150	600	150	700	150	700	150	700	100	0
Self-Propelled AA Artillery	300	100	300	100	300	100	300	50	200	50	0
Towed-AA Artillery	100	200	—	200	—	150	—	250	—	200	150

[1] Revised to reflect current information.
[2] Includes that produced by the United States; excludes France.

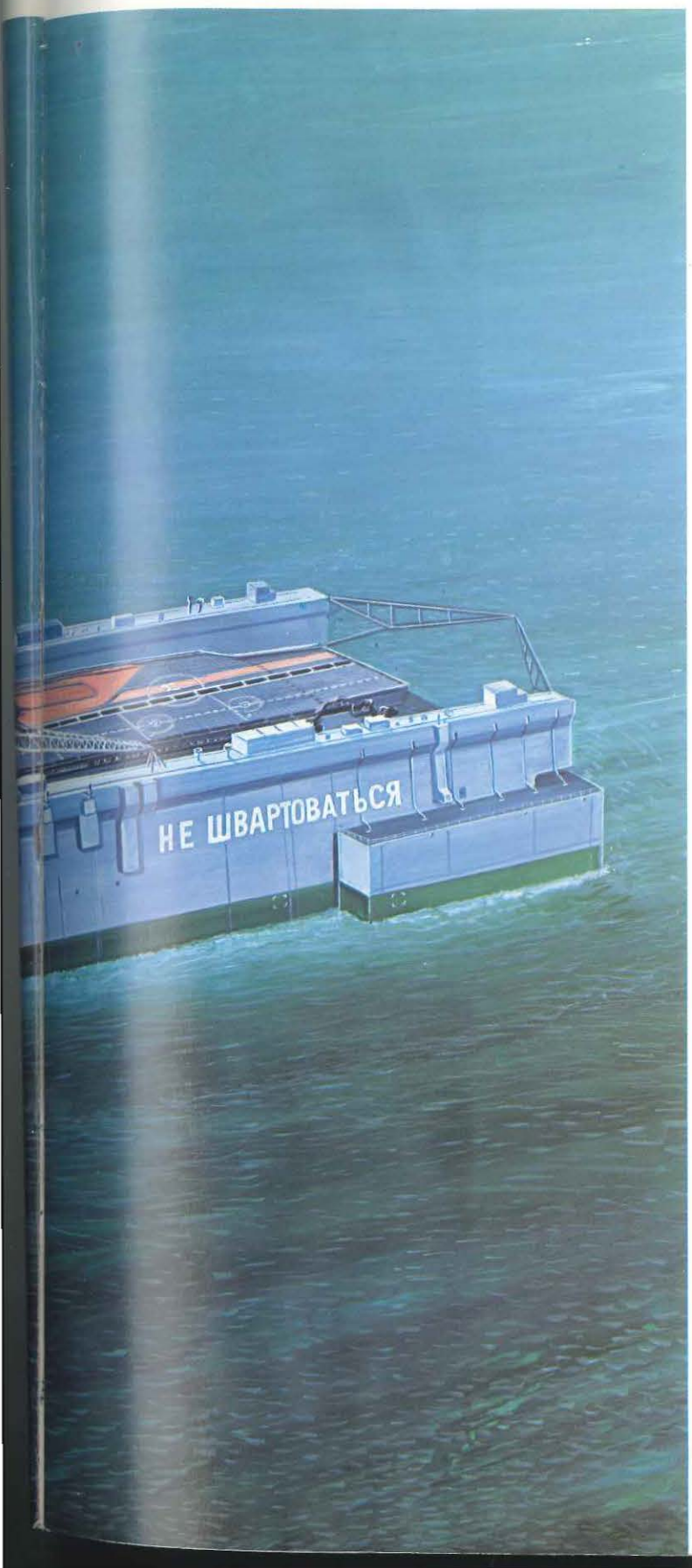


Defense production includes the new IVAN ROGOV-Class amphibious assault ship. Judging by IVAN ROGOV's characteristics, the ship can carry three air-cushion landing craft, a Naval Infantry Battalion, armored personnel carriers, tanks and helicopters.

VI SOVIET POWER PRO



J ECTION



Soviet development of increasingly capable armed forces has enhanced Moscow's ability to press its challenge to Western interests in nearly every corner of the globe. Indeed, the Soviet drive to build these forces and to press their modernization and growth flows in part from the recognition that powerful armed forces underwrite the USSR's status as a superpower and its ability to satisfy global objectives. The Soviet long-term goal has remained relatively consistent—to attain pre-eminent influence in world affairs. In pursuit of this goal, the Soviets have vigorously sought to erode the Western alliance system, to split Europe from the US, to promote instability in the Third World, and to accelerate the expansion of communist societies. Soviet techniques to implement this overall strategy have become more numerous and increasingly more flexible, sophisticated, and pragmatic.

The Third World has emerged as a vital area for the execution of Soviet global strategy, because it offers ripe opportunities for expansion with fewer constraints and lower risks of superpower confrontation. The Soviets are adept at exploiting opportunities using coordinated overt and covert means to aggrandize the power of the USSR.

The Soviets view power projection as a dynamic and coordinated application of various means including military force, diplomacy, military advisers and aid, treaties and legal ties, economic aid, and cultural, media and educa-

A KIEV-Class aircraft carrier rides in an 80,000-ton floating drydock built in Japan in the late 1970s and now serving with the Soviet Pacific Fleet. Access to such Western technology is one of many assets contributing to the enhanced ability of the Soviet Armed Forces to project power more effectively wherever required in the world.

SOVIET GLOBA



SOVIET MILITARY PERSONNEL ABROAD

	(Est.)
Latin America (including Cuba)	4,700
Sub-Saharan Africa	3,600-4,000
Mideast and North Africa	8,000
Asia* (including Vietnam)	2,500
* Afghanistan	105,000

CUBAN MILITARY PERSONNEL ABROAD

Latin America	2,000
Sub-Saharan Africa	35,000-40,000
Mideast and North Africa	300
Asia	100

Soviet Arms Clients (1977-1982)

$1 billion or more

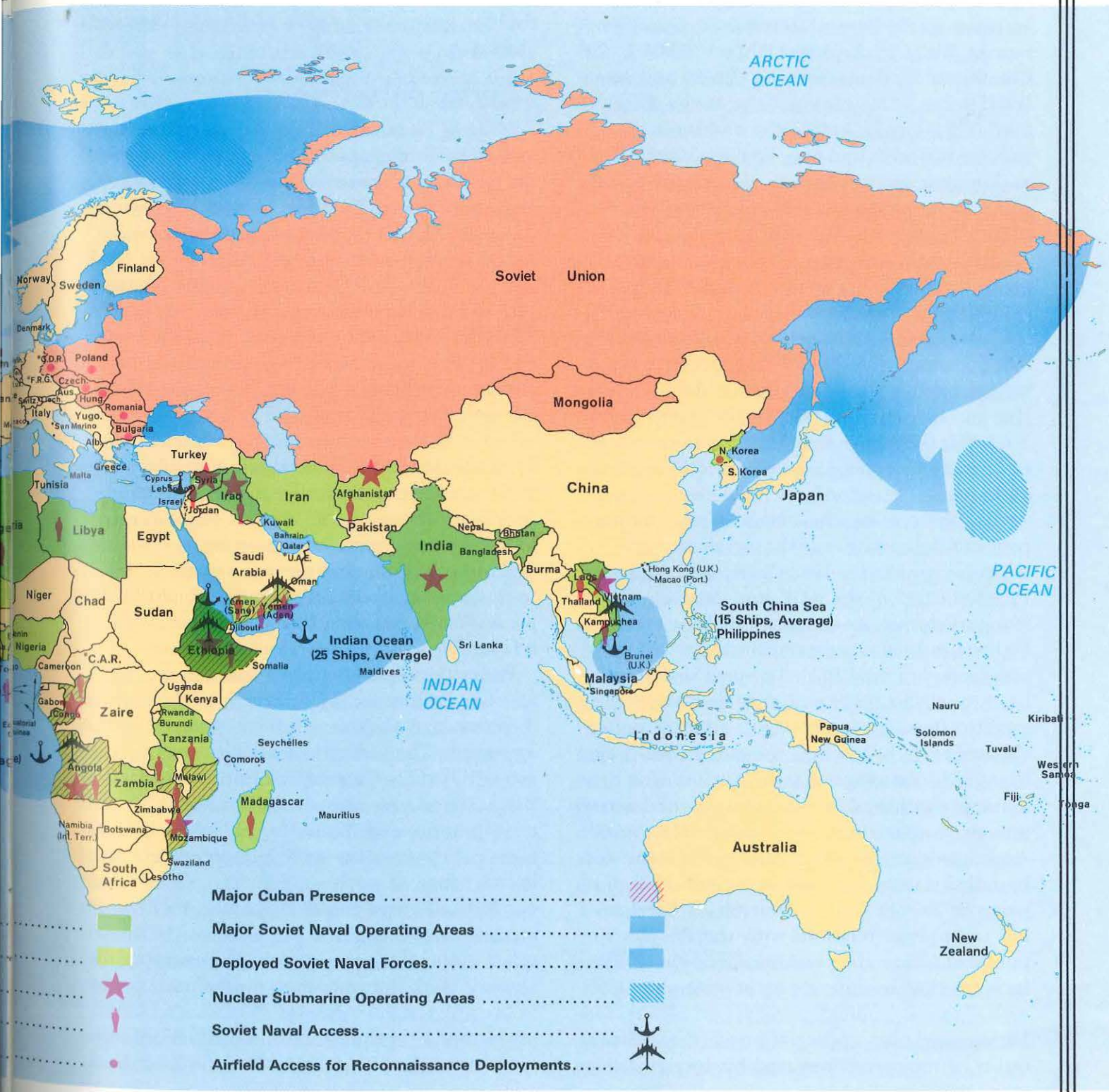
$50 million - $1 billion

Soviet Treaties of Friendship

Soviet Military Personnel Abroad

Mutual Defense Treaties

POWER PROJECTION



tional exchanges. Added to these are covert activities by the Central Committee of the Communist Party of the Soviet Union (CPSU), the Committee for State Security (KGB) and Main Intelligence Directorate of the Soviet General Staff (GRU), to include direct and indirect support for terrorists and anti-Western or pro-Soviet insurgent groups; the use of what the Soviets call active measures such as disinformation, forgeries, manipulation of the media and mass organizations, the use of foreign communist parties and front organizations and other political influence operations.

Under Leonid Brezhnev, Soviet power projection increased significantly. In his first major foreign policy speech, after succeeding Khrushchev as the top party leader, on November 6, 1964, Brezhnev signaled his intention to integrate more firmly the Soviet Armed Forces with diplomacy. Henceforth, he said, Soviet policy would proceed on the "basis of the military power of the countries of the socialist camp."

On November 12, 1982, Yuriy Andropov, for 15 years Chief of the KGB and Ambassador to Hungary during the suppression of the Freedom Fighters in 1956, succeeded Brezhnev as General Secretary of the CPSU. The new Soviet leader has brought to the top post particularly strong qualifications in foreign and military policy. His tenure as KGB chief coincided with major changes in that organization, including a dramatic expansion of Soviet espionage and active measures operations throughout the world. Andropov's actions since his appointment—especially his intensification of the anti-INF campaign in Europe and his pursuit of Brezhnev's bid to improve relations with the Peoples Republic of China after two decades of hostility—indicate that he intends to provide the USSR with vigorous leadership in foreign affairs. His background, his appreciation of the political utility of military power and his foreign policy initiatives to date, indicate that he will effectively manage the pursuit of Soviet objectives abroad.

ACTIVE MEASURES

Moscow views active measures as an offensive tool of its foreign policy aimed at influencing the decisions of governments, discrediting and undermining confidence in leaders and institutions and disrupting relations among countries. Active measures encompass both covert and overt activities such as propaganda, activities of accredited diplomats and officials, friendship and cultural societies, manipulation of the media and forgeries, use of military operations, communist parties and front organizations. One of the most important Soviet considerations in executing active measures operations is the ability to mask the Soviet government's involvement and to ensure that they appear genuine.

Active measures are an adjunct to the conventional diplomatic methods used by the Soviets. The objectives of active measures operations are to weaken the opponents of the USSR, the US in particular, and to create an environment which is favorable to Soviet views and interests.

Policy decisions on active measures are made at the Politburo level, where the general direction and themes of major campaigns are approved. The powerful International Department (ID) of the Central Committee, headed by Boris Ponomarev, serves the Politburo by receiving and coordinating inputs on Soviet foreign policy matters and by integrating the broad range of active measures and carrying out Moscow's foreign policy intentions. The International Information Department (IID), another Central Committee instrumentality, is charged with formulating, disseminating and improving the effectiveness of overt and covert propaganda worldwide. In coordination with the ID and the IID, Service A of the KGB First

Chief Directorate is responsible for those active measures which must be carried out covertly.

Since early 1980, the Soviets have often employed forgeries in attempts to aggravate relations between the US and its NATO allies and to derail NATO's INF modernization program. Soviet disinformation techniques attempt to discredit individuals, governments or policies by purveying false or misleading information. Clandestine radio stations such as the National Voice of Iran (NVOI) pass on information to domestic leftist groups, attempt to incite unrest among the population and broadcast inflammatory anti-US propaganda. NVOI was used to encourage and incite the Iranians who stormed the US Embassy in Teheran in 1979.

Active measures may include military operations in order to pressure a target country to adopt certain policies which Moscow supports. Other Soviet active measures include political and economic influence operations that attempt to promote Soviet interests. The USSR has frequently used its academics, who are trusted party and government members and its journalists to promote Soviet positions and as KGB covers.

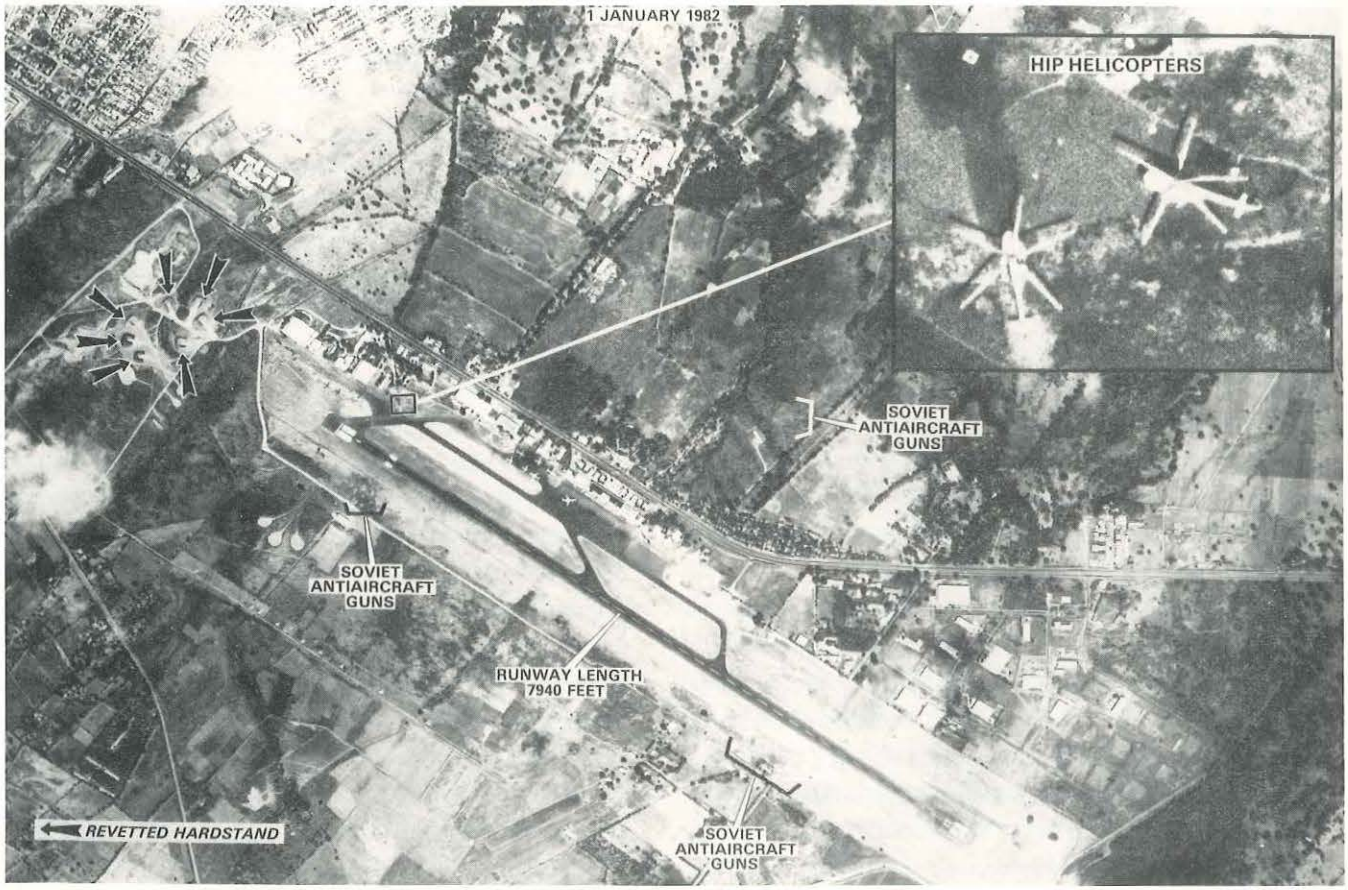
A more indirect form of Soviet active measure operations is the use of intermediaries who will undertake activities to support Soviet objectives without Moscow being directly involved in them. One such method is the use of the more than 70 pro-Soviet communist parties throughout the world. Activities of international and local front organizations dominated by pro-Soviet communists are yet another and one of the most effective the Soviets have devised to influence those who are not themselves Soviet sympathizers. These organizations are not openly pro-Soviet and are designed to attract members from a broad political spectrum. The largest and most important of these front organizations are the World Peace Council (WPC) with affiliates in over 130 countries, the World Federation of Trade Unions, the World Federation of Democratic Youth and the Women's International Democratic Federation.

The Soviet "peace campaign" has made use of every resource available to Moscow: the WPC and its affiliates, the other front organizations and communist parties have all played an important role in organizing demonstrations and conferences against strengthening NATO militarily. In their present campaign, the Soviets have employed the fronts to support a variety of well-meaning religious groups, antinuclear movements, pacifists, environmentalists, youth and women's groups, and others. It must be noted that similar groups are not permitted to operate freely in the USSR and Eastern Europe to provide a counterpoint to Soviet military, and especially nuclear, programs.

Over the next several months, Moscow can be expected to make a determined effort to mobilize mass demonstrations, civil disobedience, and possibly violence in Western Europe as part of a major active measures campaign. It will attempt to stress anti-US themes in the "peace campaign" while deflecting world attention from Soviet defense programs and expenditures. Active measures permit the Soviets to introduce their ideas into the Western domain in such a way that the ideas are identified as Western. Soviet foreign policy will benefit from General Secretary Andropov's proven ability to direct active measures. The continuation of such measures can thus be anticipated, especially as they relate to the frustration of Western defense initiatives.

LATIN AMERICA

The significance of Latin America in Soviet strategy has increased measurably in recent years. The Soviets along with their Cuban surrogates, have encouraged, directed, and ex-



Sandino Airfield, Nicaragua, upgraded with Soviet equipment.

ploited leftist groups in countries where Moscow sees a potential for bringing revolutionary regimes to power. Soviet and Cuban efforts received a major boost from the July 1979 Sandinista victory in Nicaragua. With willing help from Nicaragua the focus shifted to El Salvador, and plans were laid for similar outbreaks of communist-led revolts in Guatemala, Honduras and Costa Rica.

To avoid greater visibility and protect itself from possible negative repercussions, the USSR has used Cuba as the instrument to execute Soviet strategy in the region. Cuba also serves as a base for cadre training and weapons transshipments to regional subversive insurgent groups.

The best known element of the Soviet military presence in Cuba is the 2,600-man brigade. The primary objectives of this unit, essentially a reinforced motorized rifle regiment, are to serve as a sign of Moscow's support to Cuba and to protect Soviet installations and personnel. The brigade is located in the Havana area, where some of the 8,000-to-10,000 Soviet military and civilian advisers are also located.

Cuban assistance in the pursuit of the Soviet Union's objectives worldwide has been handsomely rewarded. In addition to approximately $3.5 billion in annual economic aid to Cuba, the USSR has provided grants of more than $3 billion in arms since the early 1960s. More than

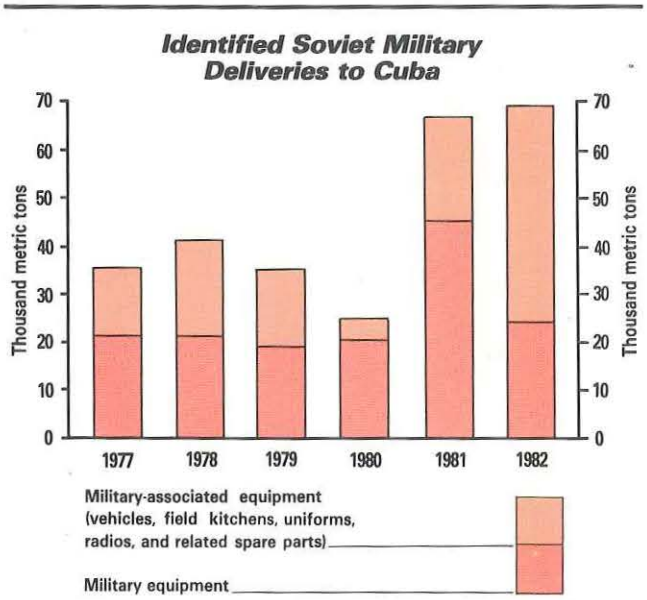


The Soviet Union has continued to add to Cuba's military strength with such weapons systems as the FOXTROT-Class submarine, KONI-Class frigate, SS-N-2 STYX naval cruise missile and the SA-3/GOA surface-to-air missile.

$1 billion of this aid has come during the past two years. In 1981, and again in 1982, Cuba received more than 60,000 tons of arms from the USSR, more than in any other year since the 1962 missile crisis. Because of the deliveries, Cuba now has the military capability to interfere with shipping in the Caribbean, Gulf of Mexico and nearby portions of the Atlantic Ocean. Moreover, Cuba has acquired a capability to project combat forces in the region by both sea and air lift. In addition to numerous transport aircraft and a sizable merchant marine, Cuba acquired two POLNOCNY-Class amphibious assault ships in 1982.

In Nicaragua, the Soviets rely on the Cubans to provide primarily overt assistance, although last year the Soviets became more openly supportive of the Sandinista regime by agreeing to economic and military aid programs and by praising the regime's achievements and ideological development. Since 1980, increasing quantities of Soviet-made military equipment have been transshipped to Nicaragua through Cuba and other third countries.

Soviet assistance to Grenada has taken the form of supplying weapons, construction equipment, the promise of a satellite earth station and development of an airfield and a seaport on the east coast of Grenada. The principal Cuban project in Grenada is the Point Salines Airport project which was begun in January 1980; several hundred Cuban construction workers and technicians are currently working at the site. Twenty-five percent of Grenada's national budget is allocated to this project. When completed, the airport will have a 9,800-foot runway,



and will be able to support Cuban troop flights to Africa, Soviet reconnaissance flights and fighter aircraft. The rapid buildup of Grenada's military potential is unrelated to any conceivable threat to the island and totally at odds with the pattern of other Eastern Caribbean States, most of which are unarmed. The Soviet/Cuban militarization of Grenada, in short, can only be seen as power projection into the region.



Soviet T-55 Medium Tank in Peru.

Between 125 and 150 Soviet military advisers are in Peru at any given time; this exceeds the total number of US security assistance personnel throughout the entire Latin American region.

Overall, Moscow has stated openly that its policies in Latin America have brought positive results. While promotion of anti-US policies by the governments in the Western Hemisphere will continue to be the Soviet near-term objective, the creation of pro-Soviet regimes will remain Moscow's ultimate goal.

SUB-SAHARAN AFRICA

Soviet strategy toward Sub-Saharan Africa is motivated by traditional ideological factors as well as pragmatic considerations. The sub-continent is not directly vital to the military defense of the Soviet Union, but it is important for other reasons. First, Western countries are heavily dependent upon African strategic resources. The sea routes around Africa, which carry many strategic resources, including oil, are potentially vulnerable to interdiction. Western Europe receives about 50 percent of its cobalt from the area; the US receives about 60 percent; and Japan, 68 percent. Cobalt is particularly important in the production of jet engines. Similar resource dependencies exist for chromite, industrial diamonds, platinum group metals, and manganese. Second, Sub-Saharan Africa contains nearly half of the countries in the Third World and is thus an important Soviet target for expansion and exploitation.

Current Soviet policy in Africa seeks to eliminate Western and Chinese influence and Western military access, to increase Soviet influence and military, political, commercial and cultural access, to establish pro-Soviet or anti-Western regimes, and to achieve the ability to

disrupt Western and Japanese access to vital sources of strategic raw materials. To attain these objectives, the Soviets rely on both military and political instruments. Moscow cannot compete with the West in providing economic aid. To compensate, the USSR blames Western colonialism for African poverty and claims that it is the West's responsibility to provide economic assistance. Moscow prefers to commit its limited economic aid to high visibility projects, especially those related to the development of heavy industry.

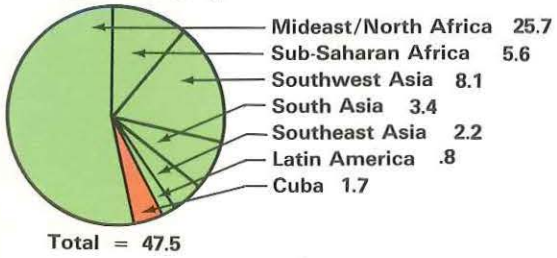
Military sales and assistance programs are the most visible and important means by which Moscow has penetrated Sub-Saharan Africa. The Soviet Union is the dominant arms supplier, trainer of indigenous military personnel and, in combination with Cuba, supplier of military advisers to the region. The Soviets have entered into military aid programs with nearly half the states in Sub-Saharan Africa. Ethiopia, Angola, and Mozambique are the USSR's most important arms clients, with Ethiopia accounting for over 60 percent of the nearly $6 billion worth of Soviet military sales to the region since 1977.

Overt political ties remain an important part of Soviet activity. In this regard, the USSR has diplomatic relations with most countries in the region. The bulk of Soviet overt activity is car-

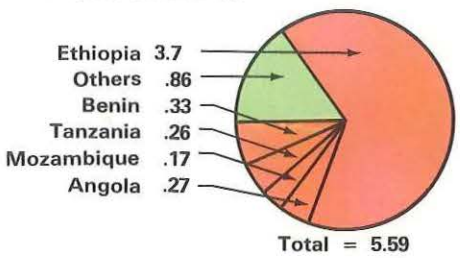
Major Soviet Equipment Delivered to the Third World 1977-1982

	Total	*Near East and South Asia*	*Sub-Saharan Africa*	*Latin America*	*East Asia and Pacific*
Tanks/Self-propelled guns	7,065	5,205	1,140	80	640
Light Armor	8,660	6,500	1,590	175	395
Artillery (100-mm and over)	9,590	5,115	3,510	420	545
Major Surface Combatants	32	19	5	1	7
Minor Surface Combatants	126	10	45	27	44
Missile Patrol Boats	53	33	4	11	8
Submarines	6	3	—	3	—
Supersonic Combat Aircraft	2,235	1,635	220	130	250
Subsonic Combat Aircraft	290	150	80	5	55
Helicopters	910	620	125	35	130
Other Military Aircraft	345	100	70	65	110
Surface-to-Air Missiles	11,680	9,495	1,575	435	175

Military Sales Agreements 1977-1982 (billions of $)



Arms Sales Agreements with Select Countries 1977-1982 (billions of $)



ried out by ambassadors and intermediate level government and party delegations. However, diplomatic personnel make up only a fraction of the total East Bloc civilian presence of 27,000. The greatest part of this number consists of economic advisers and technicians, a number of whom are undercover intelligence personnel who engage in covert operations.

There is firm evidence of continuing covert Soviet support for insurgent and dissident organizations targeted against South Africa, Zaire, Somalia, Sudan and Chad. This support is coordinated to varying degrees with Cuba, East Germany, Libya and Ethiopia. Active measures in Sub-Saharan Africa also remain a staple of Soviet activities. For example, disinformation campaigns have alleged US Government efforts to overthrow the governments of Angola and the Seychelles.

Soviet proxies are particularly active in Sub-Saharan Africa. The most important of these are Cuba and East Germany, although Czechoslovakia, Hungary, Bulgaria and Poland also participate to a lesser degree. These nations' major activities are directed by the Kremlin. Proxy activities reveal a division of labor within the Bloc, particularly between the USSR, East Germany and Cuba. East German advisers help to develop internal security forces, intelligence organizations, Marxist-style political organizations, public services and economic institutions. The Cubans, although they perform many advisory functions, are most important because they provide the manpower for military operations with approximately 36,000 troops stationed in Angola and Ethiopia.

Soviet activities are most directly focused on bolstering the client regimes in Angola, Mozambique and Ethiopia. Continuing military aid to Angola has been supplemented by a $2 billion economic aid agreement for the period 1982 to 1990, designed to reverse Angolan inclinations to seek closer ties with the West, although it is questionable whether the Soviets will, in fact, provide this full amount. Angola harbors the Marxist-oriented South West



Soviet and East Bloc military advisers train the Angolan armed forces.



African People's Organization (SWAPO), which seeks power in Namibia, and provides the USSR with access to military facilities.

The port of Luanda is the primary logistical and maintenance base of the Soviet Navy's West Africa Patrol, which usually numbers five to seven units. The patrol's mission is to maintain a Soviet presence and to provide a contingency show of force. In wartime, however, the force could disrupt the surface lines of communication pending the arrival of a Western counterforce. Surveillance of international shipping in these waters is conducted by Soviet naval reconnaissance Tu-95/BEAR Ds which periodically deploy to Luanda.

Mozambique's ruler, Samora Machel, has sought to maintain his non-aligned credentials and has avoided becoming as closely tied to the Soviets as are the Angolans. However, military successes by the National Resistance of Mozambique (NRM) may eventually force Machel to call for Cuban combat forces and increased Soviet aid. In return, Moscow seeks permanent naval access to port facilities. Mozambique, like Angola, controls ports of access to southern Africa's strategic minerals and provides a base of operations for the Marxist African National Congress (ANC), which seeks to supplant the government of South Africa. The USSR supports the more radical wing of the ANC and seems interested in frustrating a political settlement through bloodshed.

The Soviet Union has made Ethiopia the militarily dominant country in the Horn of Africa. The pro-Soviet regime of Chairman Mengistu is deeply in debt to Moscow for its military arsenal and roundly praises Soviet activities and policies. Ethiopia serves as a home base for the destabilization of Somalia, Djibouti and the Sudan.

In Ethiopia, the Soviets use the airfield at Asmara, and have exclusive use of the naval facilities they constructed on the Dahlak Archipelago. Soviet Il-38 anti-submarine warfare aircraft are usually deployed to Asmara and fly patrols over the Red Sea, the Gulf of Aden and the Arabian Sea. At the Dahlak base, the Soviets have been improving naval support facilities over the past six years. A floating drydock, barracks, helicopter pads, floating piers, and navigational aids have increased the usefulness of the facility, which handled about 87 Soviet naval ship visits in 1982.



Il-38/MAY Reconnaissance Aircraft

In sum, Soviet influence and involvement in Sub-Saharan Africa have increased greatly since 1975, when the Marxist regime in Angola came to power with Cuban and Soviet assistance. Although Moscow has suffered setbacks in the Sudan, Somalia, Guinea and Zimbabwe, regional instability makes Africa a lucrative target for Soviet expansionism.

NEAR EAST/NORTH AFRICA

Over the long term, the Soviets aspire to have the prevailing military presence in the region in order to influence the policies of the countries in the area. To achieve their goal, the Soviets are attempting to attain several short-term objectives. The Soviets are anxious to play a leading role in any Middle East peace process in order to tailor events to their liking. Although the Soviets seek to establish diplomatic relations with moderate Arab regimes, they would like to see these regimes replaced with ones more favorable to the Soviet Union. The Soviets also strongly support already established pro-Soviet regimes in the region and strive to gain additional access to port and air facilities. Arab countries have been the largest purchasers of Soviet military equipment.

Since the 1973 Arab-Israeli war, the Soviets have paid close attention to the PLO. As the US influence in the region grew, the Soviet-PLO relationship grew. This culminated in 1981 with full diplomatic status being granted the PLO by the USSR.

Soviet-Syrian relations were buttressed by the October 1980 treaty of friendship and cooperation between the two nations. This treaty was cited by a Soviet spokesman as the basis for the first joint Soviet-Syrian amphibious exercise, held in waters off Syria in July 1981.

Soviet-PLO, as well as Soviet-Syrian relations, were strained by the June 1982 Israeli invasion of Lebanon. The Soviets were concerned over their inability effectively to aid their PLO and Syrian clients. In order to recoup their position in Syria, the Soviets have placed advanced air defense equipment, most notably SA-5 surface-to-air missiles, with Soviet technicians in the country. Provision of this equipment is in addition to replacements for Syria's losses in the June 1982 campaign.



Il-76/CANDID Long-Range Jet Transport

The USSR's two major arms clients in North Africa, Libya and Algeria, have accounted for the bulk of Soviet military sales to the Middle East. Both countries also rely upon Soviet advisers to maintain their equipment and train their troops. In July 1981, two Soviet naval combatants entered a Libyan port for the first time since 1970. Soviet naval visits to Libya have since become a regular occurrence.

The USSR's increased military presence in Syria provides it with a valuable weapon in ensuring its place in any Middle East peace negotiation. While relations with the PLO are not as good as before June 1982, that organization still needs Soviet political support, and thus is subject to Soviet influence. Soviet presence in and additional access to facilities in Libya and Syria can restore the USSR's military position on the Mediterranean littoral lost with their 1976 expulsion from Egypt.

SOUTHWEST ASIA AND THE INDIAN OCEAN

The Soviet Union views Southwest Asia as a region of great strategic significance. Iran is important because it has oil resources, is adjacent to the USSR and dominates the Persian Gulf oil chokepoint at the Strait of Hormuz. Iraq is a major source of hard currency for Moscow in return for Soviet military aid. Afghanistan is significant as a potential base for future military actions against Persian Gulf countries, as a way to further isolate China, and as a base for subversive activities against neighboring Pakistan. North and South Yemen offer control over the Bab el Mandeb Strait and access to the Red Sea/Suez Canal as well as potential strategic and diplomatic leverage on the oil-rich Arabian peninsula. Moscow also sees Southwest Asia as a key link between the USSR and the African continent as well as the Indian Ocean. Moreover, Soviet leaders believe that the area lends itself to the exploitation of Western vulnerabilities, particularly the dependence of NATO members and Japan on its oil.

For these reasons, the Soviet Union is working hard to establish itself as the principal power in the region. The proximity of Soviet military forces gives Moscow unique political leverage in this respect. The presence of 105,000 Soviet troops in Afghanistan, the ground forces and Soviet air regiments in neighboring Soviet Military Districts, and the Soviet naval forces operating in the Indian Ocean are a vivid reminder of Soviet capability to act militarily in Southwest Asia and the need for countries in that region to keep Soviet objectives in mind.

Arms sales provide the rationale for the dispatch of Soviet military personnel to Southwest Asia. Soviets serve as instructors, advisers, and technicians who conduct military training, monitor the arms supply and inventory system, and help with the delivery, assembly and maintenance of equipment. Excluding Afghanistan, there are currently some 2,500 Soviet advisory personnel working in Southwest Asia, with most of these in South Yemen and Iraq.

As another means of fostering ties to the region, the Soviets extend economic aid, to include the sending of thousands of economic technicians as well as training in the USSR itself. Projects normally are concentrated on basic infrastructure development such as dams, powerplants, steel mills and oil production. Between 1977 and 1981, approximately $1.5 billion in economic aid was extended. Over 16,000 Soviet technicians are working on various industrial projects in Southwest Asia.

The USSR also promotes ties between "progressive" pro-Soviet states in the region. In early 1981, the Soviets helped lay the groundwork for a political/economic/military alliance among three Soviet client states. The effort culminated in the formation of the Tripartite Agreement signed by Ethiopia, Libya, and South Yemen on 19 August 1981, which provided for coordinated military activities and other efforts against pro-Western countries in Southwest Asia and the Middle East.

South Yemen, which brokered the Tripartite Agreement, is a major Soviet arms client and supporter of Soviet policies in Southwest Asia. Since 1967, Aden has signed close to $1 billion in arms agreements with Moscow, and for the past six years the USSR and its Eastern European allies have been South Yemen's sole source of weapons. Approximately 2,000 Soviet military personnel are in country. Soviet influence and control in South Yemen are more pervasive than in any other nation in the region, and Moscow enjoys ready access to Aden's air and naval facilities.

While arms sales remain Moscow's main in-



Ships such as the BAL'ZAM-Class intelligence collector, the freighter VOSTOK and the MIKHAIL KALININ-Class transport (top to bottom) provide direct support to the Soviet armed forces. The Soviet merchant, research, fisheries and intelligence collector fleet numbers in the thousands and contributes both to the USSR's military capabilities and the projection of Soviet influence.





strument of political penetration in Southwest Asia, active measures, again, are next in importance. These subversive activities focus mainly on Iran and Pakistan where the Soviets face governments particularly opposed to the Soviet occupation of Afghanistan.

ASIA

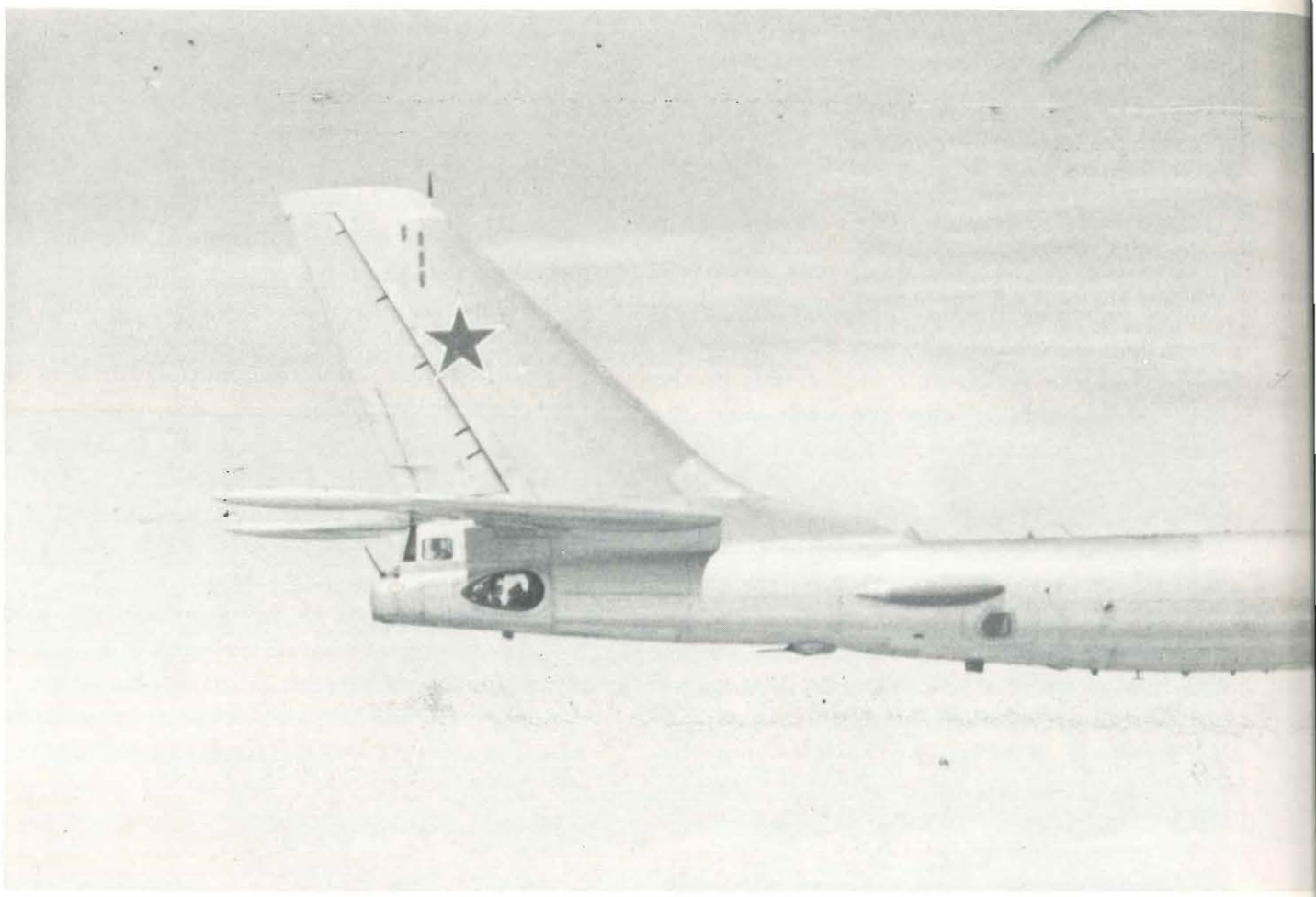
Soviet activities in Asia continue to be conditioned by two overriding factors, Sino-Soviet relations and the geographic remoteness of the USSR from many of the key nations in the region. Efforts to improve relations with China were an important aspect of Soviet foreign policy in 1982. Throughout the year the Soviets orchestrated a number of exchanges, sent a series of positive signals through major leadership speeches, reestablished contacts at the deputy foreign minister level, and took the opportunity of Brezhnev's funeral to give special attention to the Chinese delegation. In spite of this flurry of activity, the Soviet Union has made only token gestures to improve relations. The reality of the relationship remains the continued military presence of more than 50 Soviet divisions along the Sino-Soviet border, supported by some 1,700 aircraft, excluding the BACKFIRE, and about one-third of the SS-20 force. These forces demonstrate that in Sino-Soviet relations, as in most other regions, Soviet military power remains the fundamental support for Soviet policy.

The Chinese clearly recognize the threat posed by Soviet military forces in Asia and have made discussions on these issues a precondition for improvements in relations. The USSR may propose cosmetic adjustments in its forces along the border, but will be unlikely to undertake more than token force reductions. In this connection, the Soviets have made major strides in expanding their military presence in Asia since 1979 in pursuit of their long held goal of encircling China.

The major focus of Soviet activity in Indochina has been the strengthening of ties with Vietnam, Laos and Kampuchea. Moscow views these states as a base from which expansion can occur. Further, support for these communist regimes boosts Moscow's ideological credentials and demonstrates the "forward march of socialism." Since these Indochinese regimes are also anti-Chinese, Moscow's support furthers its goal of encircling China.

Moscow has invested considerable resources in Indochina. Since 1979, over $2 billion in military aid, supported by approximately 2,500 military advisers, has been channeled to communist states in Southeast Asia. Since 1976, approximately $5 billion in economic aid and 3,750 economic advisers have been provided to these nations. As a result, Vietnam has become dependent on Moscow and its Eastern European allies for military and economic support. Soviet aid programs currently surpass the peak war years and provide Moscow with leverage over Vietnamese policies.

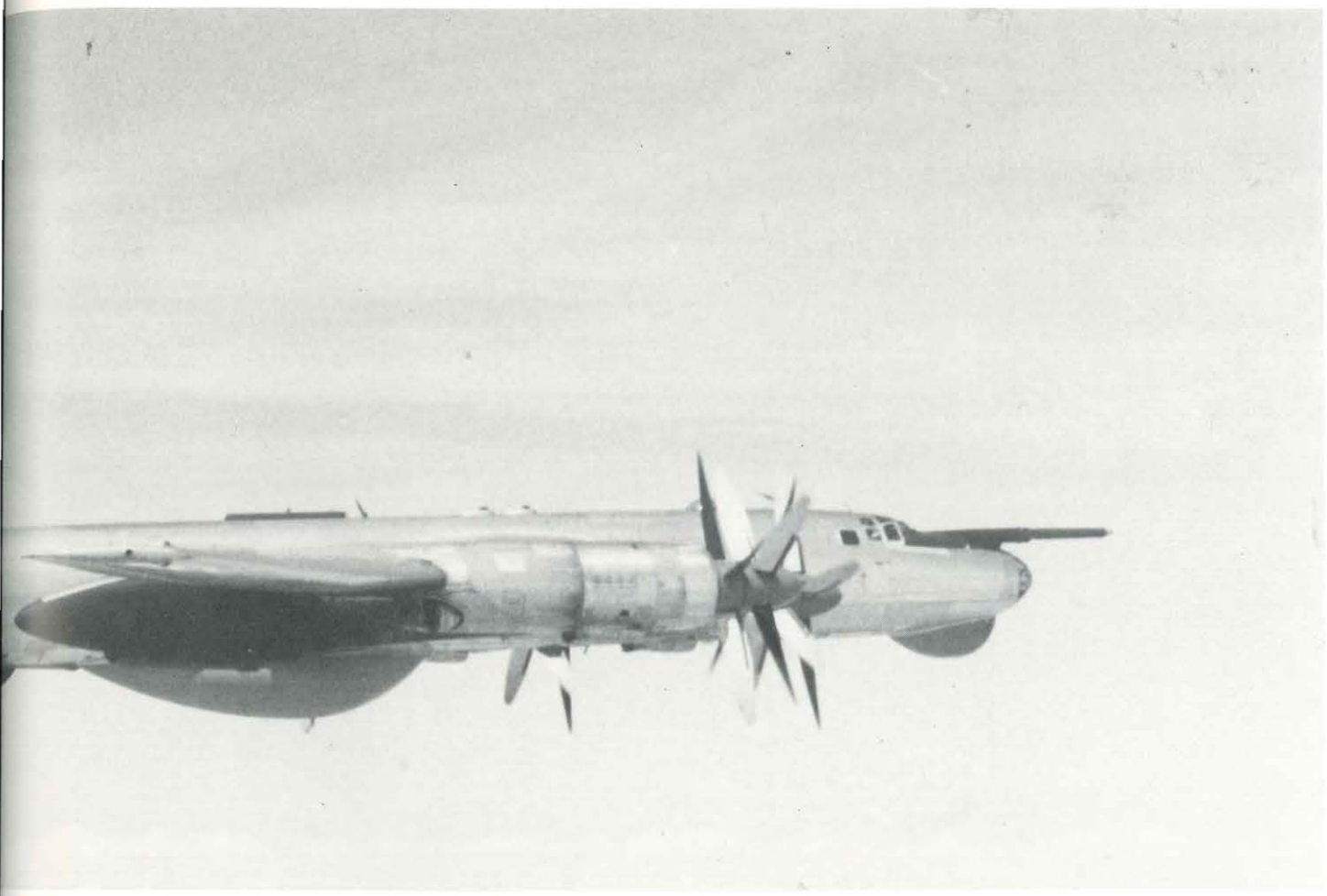
In return for this support, the Soviets have gained access to several facilities in Vietnam, Cam Ranh Bay being the most noteworthy example. At Cam Ranh, they have established a facility with improved communications and intelligence collection capabilities to support operations in the South China Sea and Indian Ocean. Soviet naval aviation BEAR D and F aircraft maintain a nearly continuous deployment to Cam Ranh, from which they conduct intelligence collection and antisubmarine warfare missions. Over 100 of these aircraft have deployed to Vietnam since 1979. In the same year, the USSR established a permanent naval presence of approximately 15 warships and auxiliaries in the South China Sea.



Tu-95/BEAR D and F long-range reconnaissance and ASW aircraft operate from Cam Ranh, Vietnam.

The Soviets have been unable to promote arms sales or economic ties to gain influence in Thailand, Burma, Indonesia, Malaysia, Singapore or the Philippines. The USSR's political efforts have been thwarted by the anticommunist orientation of these states, which has been strengthened since the Soviet invasion of Afghanistan. Soviet political penetration has also been hampered by regional repugnance of the Vietnamese occupation of Kampuchea. Consequently, the USSR's activities in noncommunist Southeast Asia have centered on open diplomacy and active measures.

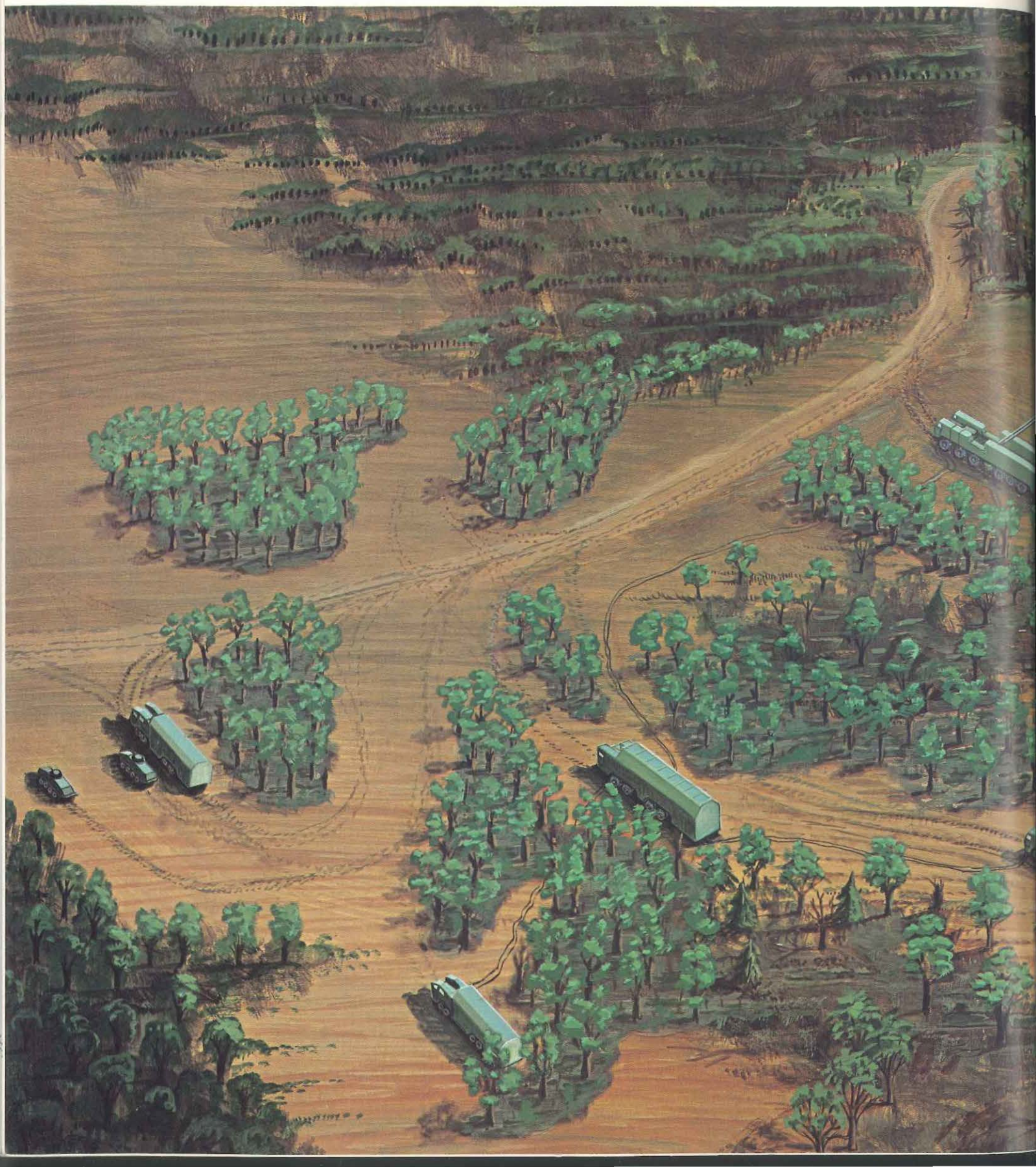
Lack of similar access has constrained Soviet actions in South Asia. As in other regions, military sales remain the most important Soviet tool for penetration. Virtually all their efforts in South Asia have been directed toward India, which is the USSR's fourth largest arms client in the Third World. Recently, India began a well publicized arms diversification effort which revealed the importance of the arms relationship to Moscow. In March 1982, a high-powered military delegation led by the Soviet Minister of Defense, Marshal Ustinov, visited New Delhi in an effort to limit Indian purchases of Western equipment. New Delhi is aware of the political significance Moscow attaches to arms sales and

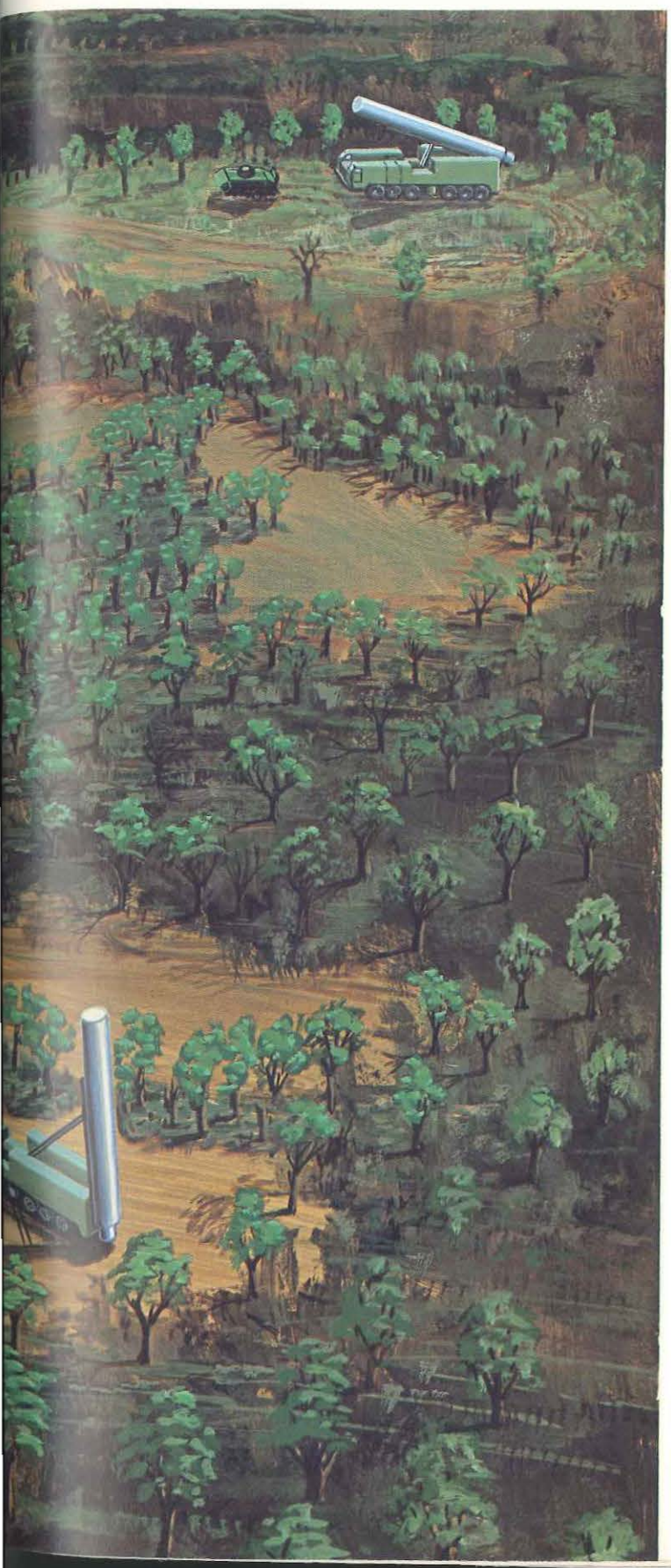


has taken steps to control the number of military technicians Moscow prefers to dispatch to assist in implementing arms agreements. Moscow has also provided India with more economic aid than any other noncommunist recipient, about 15 percent of India's total, and the Soviets are a major trading partner with India.

In 1980, Japan publicly revealed that the Soviets had undertaken a considerable military buildup on its Northern Territories—four islands immediately to the east of Hokkaido occupied by Soviet forces. A principal reason for this buildup has been to provide the Soviets with an assured sanctuary in the Sea of Okhotsk for DELTA-Class ballistic missile submarines. However, the buildup also underscored the USSR's intention to maintain possession of the disputed Northern Territories. In addition to this military activity, the Soviets have conducted a wide variety of active measures in Japan, some of which were publicly exposed in 1982 by a KGB officer who defected.

VII THE CHALLENGE





As a result of the 20-year buildup of the USSR's Armed Forces, the global military balance has been shifting steadily against the United States and its Allies. As the words of the NATO Secretary General in his foreword to the official 1982 NATO publication *NATO and the Warsaw Pact—Force Comparisons* underscored, the deterrent strength of the Atlantic Alliance is increasingly threatened. Moreover, regions that once were free from the threat of Soviet Armed Forces have now come under its ominous shadow.

General Secretary Andropov, in his first statement to an assemblage of the top echelon of the USSR, after his selection as Brezhnev's successor, reaffirmed the continuity of fundamental Soviet military goals. He pledged not only to stand behind but also to carry forward the military policies of his predecessor. He told the Central Committee plenum that met on November 22, 1982:

> "As always, the needs of defense have been taken into account to a sufficient extent. The Politburo has considered and considers it obligatory, particularly in the present-day international situation, to provide the Army and Navy with everything necessary."

One month later, the Secretary General had this to say:

> "The allegation of a 'lag' behind the USSR which the Americans must close is a deliberate untruth . . . . We will be compelled to counter the challenge of the American

More than 330 mobile, SS-20 Long-Range INF missile launchers—with three nuclear warheads on each missile and with reloads for each launcher—are now in the field targeted against Western Europe, China and Japan. The highly accurate SS-20 when field deployed has great mobility to ensure survivability.

side by deploying corresponding weapons systems of our own, an analogous missile to counter the MX missile, and our own long-range cruise missile, which we are already testing, to counter the US long-range cruise missile . . . . Any policy directed against securing military superiority over the Soviet Union has no future and can only heighten the threat of war."

He made no mention of the complete modernization and MIRVing of the Soviet ICBM force at a time when many in the West believed that such strengthening of strategic offensive forces had been set aside by the strategic arms agreements which the USSR had signed.

Nor did he mention the Soviet Union's increase of deployed SS-20 Long-Range INF missile launchers from 250 to more than 330 in little more than a year when related negotiations were in progress.

He failed to discuss the USSR's continuing deployment of an offensive chemical warfare capability to its forward-deployed forces in Eastern Europe and the use of chemical warfare in Afghanistan and Southeast Asia.

And, no mention was made of the increasing forward deployment of other ground-, air- and sea-based nuclear-capable weapon systems closer to the borders of the nations of Western Europe and Japan.

The relentless increase in Soviet military power belies the General Secretary's words. In shaping US defenses and in consulting and cooperating with Allies on the common defense, the US must heed Soviet actions, not Soviet propaganda and active measures campaigns. The buildup and modernization of the USSR's strategic forces, theater forces and space systems have been catalogued in the preceding chapters of this report as have the increases in allocations of resources to the Soviet military and in the capacity for projection of Soviet military power around the world.

The Soviet military modernization program has resulted in a significant shift upward in the quantity and quality of all Soviet forces. Moreover, improvements in Soviet military capabilities have not been limited to weapon systems. They are also reflected in the reorganizations of their command structure to facilitate a transition to war and to achieve more effective control of operations.

In the brief period since the First Edition of *Soviet Military Power* was issued in 1981, the rate of upgrade of all elements of the Soviet war machine has been extraordinary. The recent change in Soviet leadership gives every indication that neither the direction or the pace of military programs is likely to slacken.

While the quest for effective and equitable arms control agreements has continued, the Soviets have modernized every component of their armed forces and explored the potential for producing even more capable and sophisticated systems.

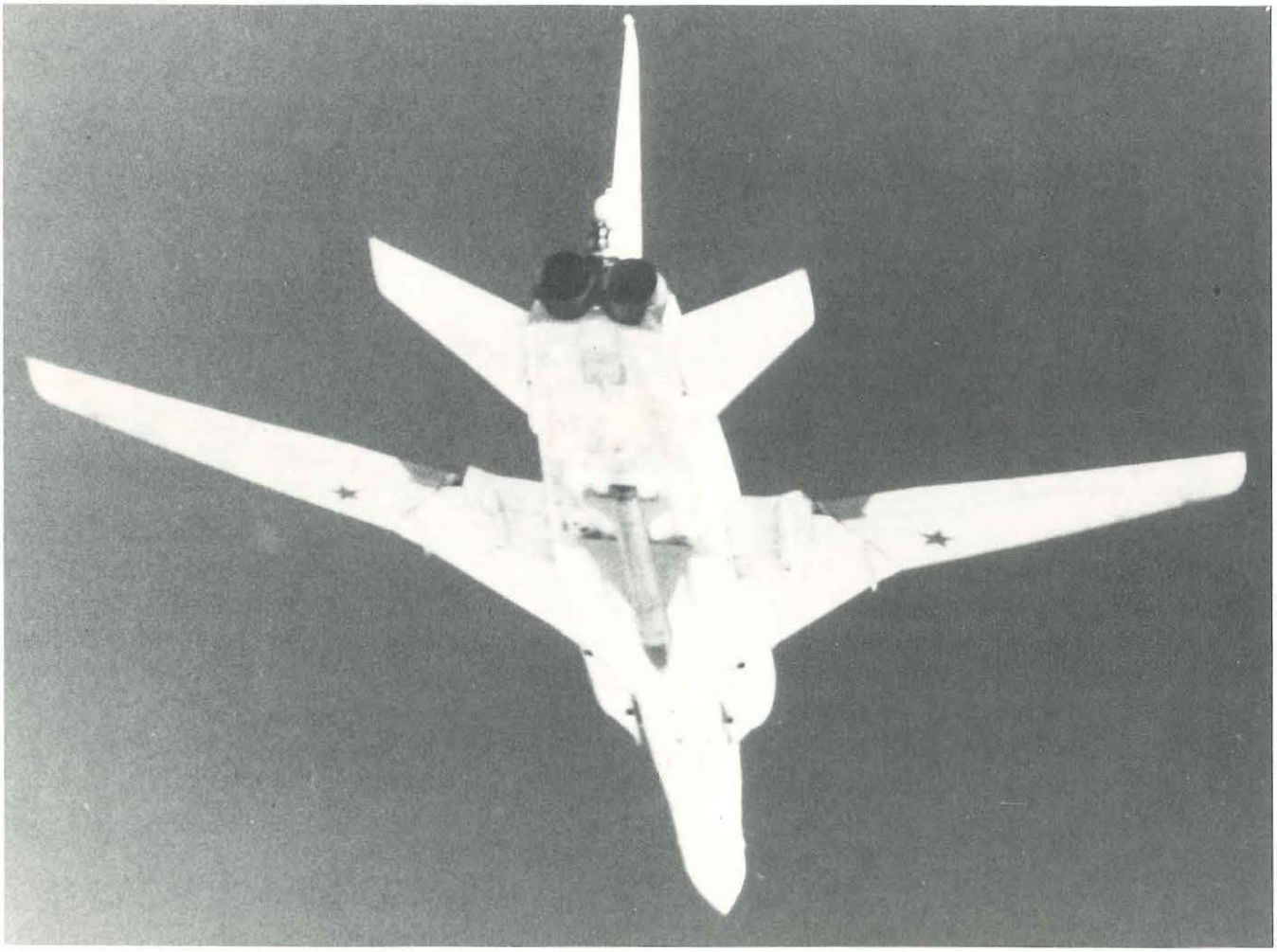
- Their ICBM force continues to be modernized with the deployment of the SS-18 Mod 4 and SS-19 Mod 3 in super-hardened silos. Flight testing of two new solid-propellant ICBMs has begun.
- Their SSBN force continues to be modernized with the production of additional units of the TYPHOON-Class submarine, with 20 MIRVed SS-NX-20 nuclear ballistic missiles in each submarine.
- Their bomber force is being modernized with the development of the new long-range BLACKJACK strategic bomber, and the continued production of BACKFIRE bombers.
- Their strategic defenses are being modernized through improvements in their ABM complex, surface-to-air mis-

siles, phased-array radar networks, new interceptors and the construction of hardened, buried bunkers for key personnel.

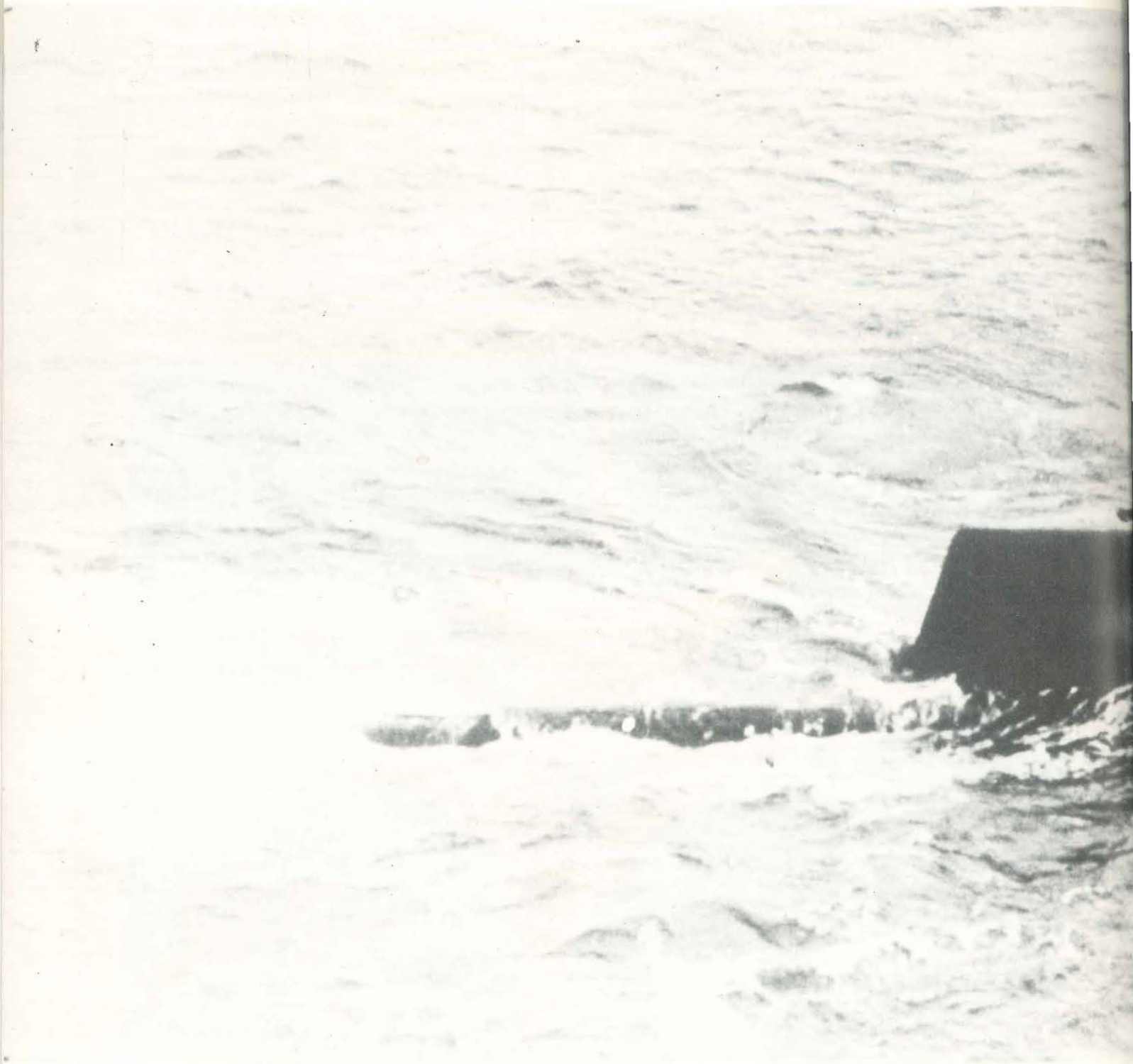
• The Soviets continue to produce and deploy the three warhead SS-20 in both the Western and Far Eastern Theaters and are likely to construct additional complexes beyond those presently under construction.

• Their ground forces are being upgraded with the T-80 tank, the nuclear-capable SP-152 self-propelled gun, improved armored personnel carriers and the HIND and HIP attack helicopters and better comunications and electronic warfare equipment.

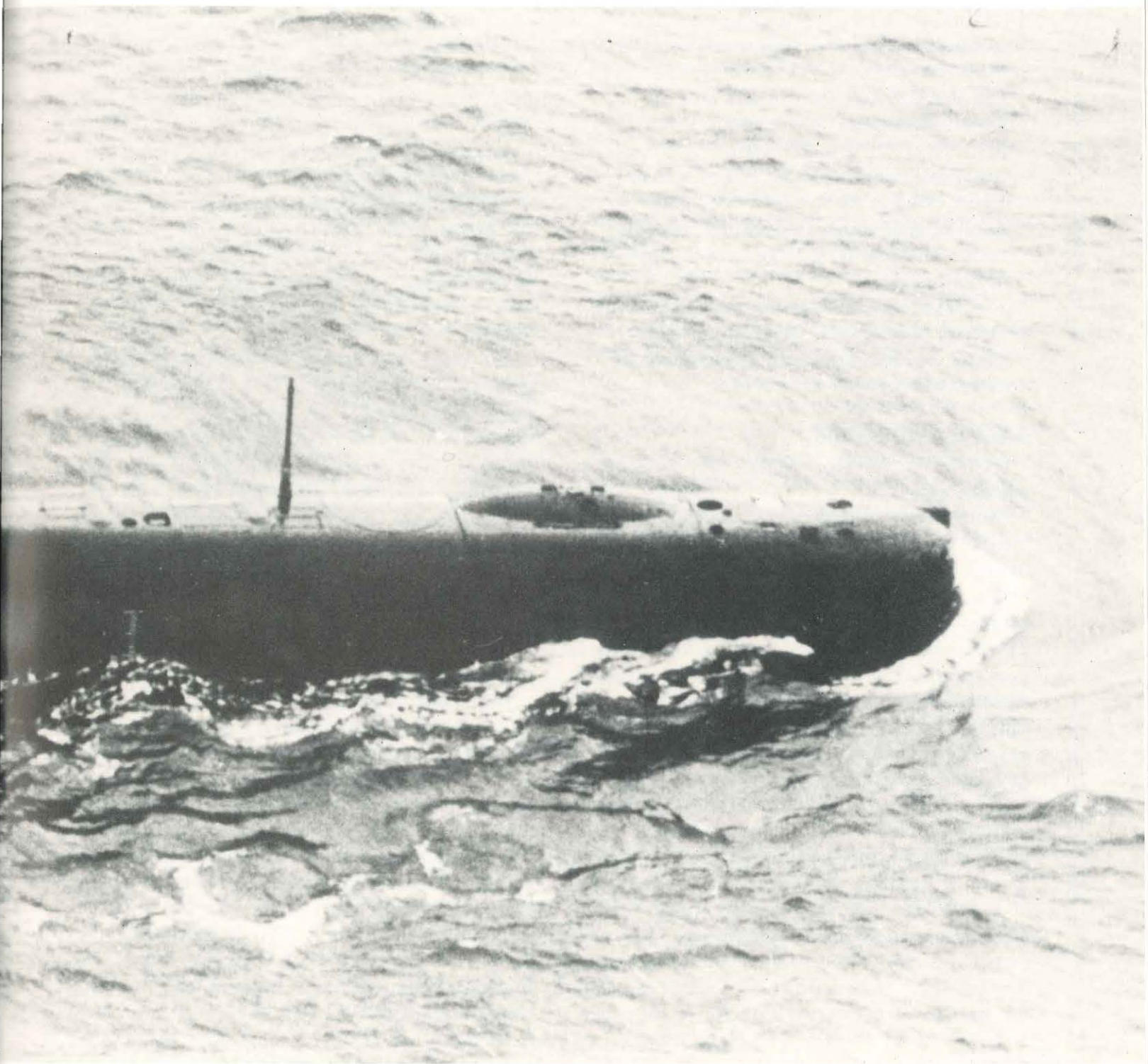
• Their Air Forces are becoming increasingly more capable with the continued deployment of the FLOGGER and FENCER aircraft, with the production of the FROGFOOT ground attack aircraft and with the flight testing of the FLANKER and FULCRUM high-performance interceptors.



The Tupolev BACKFIRE Swing-Wing Bomber with fuselage-mounted AS-4 air-to-surface missile.



The new OSCAR-Class nuclear-powered cruise-missile attack submarine running with sail surfaced.



- Their Navy is being upgraded and increased in size with additional units of the KIEV-Class carrier, KIROV-Class and KRASINA-Class cruisers and the SOVREMENNYY- and UDALOY-Class destroyers. Their modern attack submarine fleet continues to grow with the addition of OSCAR- and VICTOR-Class cruise missile units. In addition, development continues on a larger, more capable aircraft carrier.
- With one antisatellite (ASAT) system already operational, development continues on more advanced applications of Soviet military power in space.

THE RESPONSE

The facts are clear. What they portend is equally clear.

Military power continues to be the principal instrument of Soviet expansionist policy. Year in and year out, for the past two decades, the Soviet Armed Forces have been accorded an inordinately large share of the national resources. The capabilities of those forces—relative to our own and those of our allies—have been steadily augmented in every dimension; and there is no sign of abatement of the scope of buildup. They have been readied for war at any level and at any time. Doctrine, structure and offensive posture combine to constitute a threat of direct military action that is of unprecedented proportions. However, the Politburo's grand strategy is to win, if possible, without wholesale shedding of more Russian blood save as necessary to complete the subjugation of Afghanistan. Thus, the main operative role of that formidable war machine is to undergird, by its very presence, the step by step extension of Soviet influence and control by instilling fear and promoting paralysis, by sapping the vitality of collective security arrangements, by subversion, by coercive political actions of every genre.

The lengthening shadow of Soviet military power cannot be wished away or ignored. But neither does it provide the slightest basis for despair. We have the capacity to restore a stable balance and to do so without jeopardizing our other national goals. The combined resources of the United States and its Allies dwarf those of the Soviet orbit. More to the point, we have reservoirs of strength without counterpart in the Soviet Union: the concepts and values of the great civilizations which are our priceless legacy.

We must—and we can—invalidate the Soviet strategy. In conjunction with our Allies, we must— and we can— convince the Soviet Union that it cannot profit from the use of force or the threat of force in the international arena. We must stay the course our predecessors had the wisdom to plot in forging the North Atlantic Treaty, the Rio Treaty, the ANZUS Treaty and the bilateral pacts with our Asian Allies to provide for the common defense.

Deterrence of direct attack on US interests and those of our Allies must command our priority attention and shape our defense programs. The capabilities needed to prevent war—war which we will never initiate—are fundamentally different from those that drive Soviet force development and deployment. Given these asymmetries, there is no requirement to match the Soviets unit for unit, weapons systems for weapons systems. What is required is a nuclear and conventional posture that makes any Soviet military option too uncertain of outcome and too high of cost to be pursued. That posture is in part military sinew and in part national resolve. The combination must convince the aggressor that we have the stamina to withstand an initial onslaught and the will to respond in a manner that denies attainment of the objective of aggression.

Apart from the deterrence of direct attack, we must prevent the Soviet Union from exploiting its growing military strength—on and off the Eurasian land mass—to further its objectives through coercion and other indirect means. Our collective security arrangements—strengthened by the mutually supporting assets of our Allies, our forward deployments and our rapid reinforcement capabilities—provide the barrier against such threats. Our alliance structures must continue to make evident to the entire world that we stand together against all threats to the territorial integrity or internal security of any members.

The defense programs we have set in train will help to redress the adverse trends in the military balance and assure that the Soviet Union cannot capitalize on the power of its armed forces for political advantage. Our programs thus promote the security and stability of the world community.

Those programs reflect difficult choices. Given the immediacy of the threat and the inherited deficiencies of our force structure, first priority has been placed on the modernization of all three components of our strategic nuclear forces and associated command and control systems, and the readiness upgrade of our conventional forces. But we have also recognized that defense is a long-term effort, unless and until the Soviet Union becomes a fully cooperating member of a world community of nations functioning under the rule of law. Thus, we and our Allies have also begun to modernize our conventional forces, increase their staying power and expand their numbers to be able to cope with the continuing growth of Soviet military power.

We must demonstrate a constancy in our own programs. Of equal importance, we must have the resolve to work unceasingly for the security of all free nations. Only then will the Soviets be convinced that their military buildup is futile and the way be paved for restoring peace at the lowest level of armaments.


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